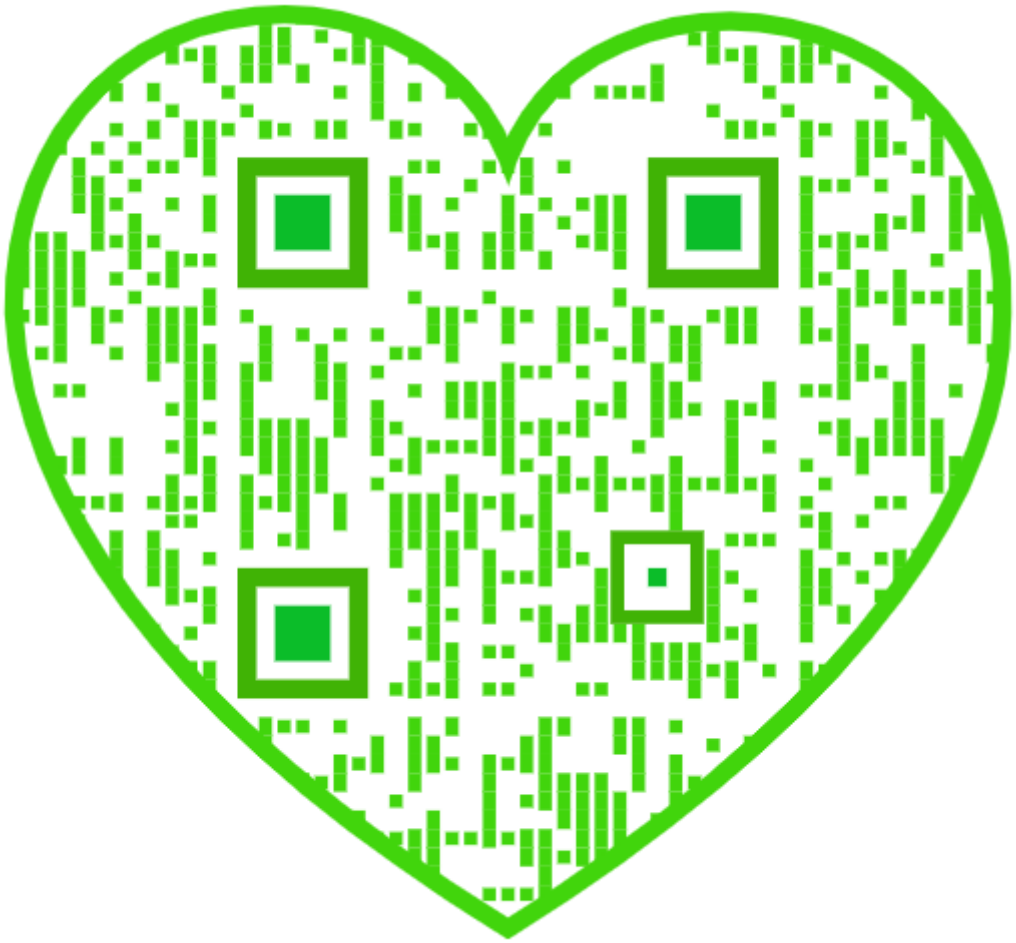

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OUTLINES OF ECONOMICS

(THIRD REVISED EDITION)

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PREFACE

THE first edition of the *Outlines of Economics*, written by Professor Ely, was published in 1893. Four persons coöperated in the preparation of a revised and enlarged edition, which appeared in 1908. This was in many respects a new book, although much matter from the earlier edition was incorporated in it, and although pains were taken to retain the general organization and especially the general point of view of the older volume. The present edition does not differ so much from its predecessor as that differed from the first edition, but it is, nevertheless, the result of a more thoroughgoing revision than is usually given to books of this kind.

Some minor changes have been made in the order in which the chapters appear; two chapters have been omitted; and a chapter on labor legislation has been added. No chapter in the book remains unaltered, and the larger part of Books II and III has been virtually rewritten. While the number of different subjects treated has been slightly reduced, the treatment of the more fundamental subjects has been considerably expanded. Each of us has undertaken the revision of a definite portion of the book and, to secure unity, Professor Young has had general editorial supervision of the revision as a whole.

Some of the changes are such as are necessary by reason of eight years of progress in industrial life, in legislation, and in economic thought. Other changes are the outgrowth of the experience gained in eight years' use of the book in university and college courses. Among the many persons to whom we are indebted for helpful criticisms and suggestions are Dr. John Cummings, Professor H. J. Davenport, Dr. C. S. Duncan, Professor L. C. Gray, Professor J. E. Le Rossignol, Professor

W. C. Mitchell, Professor T. W. Page, Professor F. M. Taylor, Mr. Ray S. Trent, and Professor N. A. Weston.

The instructors in charge of the course in elementary economics at the University of Wisconsin have generously coöperated by submitting carefully prepared lists of definite, well-considered, and pointed suggestions for the betterment of the book. We make grateful acknowledgment to Professors T. K. Urdahl, W. I. King, and H. D. Simpson, and to Messrs. Harry Jerome, A. H. Hansen, J. G. McKay, and F. L. Vaughan.

THE AUTHORS.

SEPTEMBER, 1916.

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BOOK I

INTRODUCTION

OUTLINES OF ECONOMICS

CHAPTER I

THE NATURE AND SCOPE OF ECONOMICS

THE most striking characteristics of the great field of knowledge the Outlines of which we attempt to sketch in the present volume are its rich diversity and spacious amplitude. Starting from psychology in its analysis of the human needs which explain or condition wealth, it traverses the entire field of social activities and institutions arising from man's efforts to supply his material needs. It touches on one side the physical sciences, from which it borrows some of its most fundamental principles; occupies joint territory at places with politics, ethics, and law, although their respective jurisdictions are in the main distinct; and forms at once the most fertile and most thoroughly developed province of the broad science of human society. Within its borders, if we may continue to compare the scientific possibilities of economics with the natural resources of an opulent territory, opportunity is offered for the exercise of every mental aptitude and every scientific method. The historian's gift is needed to unravel the past and trace the development of the industrial institutions whose present-day problems, in turn, offer indefinite scope for the studies of the more practical student with a taste for administration or business management. For the legal mind there are the subtle problems of property, inheritance, labor legislation, and corporation control; for the mathematically inclined, insurance and modern statistics; for students with practical political interests, the tariff, currency reform, and a score of important problems in which economics and politics are inextricably interwoven; for

the philanthropic, unemployment, accident insurance, and a number of social problems growing out of the maladjustments of modern industry. Animating the entire subject, blended with the love of truth for truth's sake common to all sciences, is the persistent hope that by systematic study we may eventually abolish the material poverty which deadens and dwarfs the lives of millions of our fellows. Economics is a science, but something more than a science; a science shot through with the infinite variety of human life, calling not only for systematic, ordered thinking, but for human sympathy, imagination, and in an unusual degree for the saving grace of common sense.

To define such a subject adequately in a few sentences is manifestly impossible. It is frequently said that economics treats of man's efforts to earn a living, and this definition is not inaccurate if by " man " we understand " mankind," and if we fully appreciate that the individual's efforts to turn an honest penny's profit receive but little attention in comparison with the community's efforts to feed, clothe, and shelter itself. Satisfaction of social need, and not individual profit, is the objective point of the science. So, similarly, economics has been characterized as the philosophy of human industry; and this description is illuminating provided we interpret " industry " broadly enough. Even the old traditional definition, that economics is the science of wealth, is true enough if we clearly understand that there can be no wealth without man, and that the science which deals with wealth, so far from being a " gospel of mammon," necessarily begins and ends in the study of man. As we prefer to define it, however, *economics is the science which treats of those social phenomena that are due to the wealth-getting and wealth-using activities of man.*

Economics treats of Man. — The supreme importance of man in the study of wealth has not always been appreciated by those who have expounded the science. Too often they have considered man simply as a producer of wealth, the one " by whom " the necessaries, conveniences, and luxuries of life are created, whereas the infinitely greater truth is that man is the one " for whom " they are all produced. Of course no

one denies this truth, but one might almost as well deny it as to leave it out of account. The result of such neglect is that men devise with great skill rules by which man may be made the best possible manufacturing machine. It sometimes quite escapes the notice of these persons that in making man the best possible manufacturing machine they may make him a very poor sort of a man; that in teaching him to supply his wants very bountifully they may prevent his developing and correcting those same wants. They forget that there are two kinds of poverty — one a lack of goods for the higher wants, the other a lack of wants for the higher goods. To become rich in goods while losing at the same time the power to profit by them is unfortunately one of the commonest retrogressions in human experience. We do not mean that the whole problem of human development is the subject of economics, but simply that manhood, rounded human development, and the equitable organization of human relationships are the objects of all social sciences, and none must consider its subject so narrowly as to exclude these objects.

Another common mistake has been to regard as of chief importance the economic activities of one particular *class*, especially the employer. Other men were treated simply as "a factor in production." An English writer speaks of dear labor as one of the chief obstacles to England's economic prosperity. Could anything be more utterly an oversight of general human well-being? Dear labor should be the very *goal* of England's economic effort, for that means abundant supply of the wants of the great mass of her people; and the fact that labor is dear, so far from being an obstacle to prosperity, is the very proof and substance of that prosperity. A glance at history indicates that men have made these mistakes not only in theory but in practice. Industries have been developed to majestic proportions while man was sinking into deeper degradation; wealth has at times grown at the expense of that human *weal* in whose service it won its name.

Economics treats of Man in Society. — This is one of those truisms which only history can make real to us. As we pass

from the savage and cannibal, up through all the stages of development, we find an ever-increasing interdependence among men. Man is least dependent when he wants least, cares least, has least, knows least, and is least. With every betterment of condition and character he is more dependent than before, more dependent and yet more free. The beginnings of barter are a confession of mutual need; the coining of money is a declaration of *dependence* to all men. We look with pride upon a century of progress, but that progress has consisted in little else than a growth of dependence, an ever-increasing departure from that rude kind of literal self-help in which each one does everything for himself. Our fathers drew water, each for himself, in "the moss-covered bucket," while our mothers dipped candles for the evening's light. If one was negligent, the rest did not suffer. Today a network of pipes radiates from a common center to enter a thousand households. An engineer makes a blunder at the station, and thousands are in darkness or drought. Progress is a passage from independence to dependence, from distrust to confidence, from hostility to amity, from helplessness to helpfulness, while the great law of social solidarity gains ever-increasing importance. Our science, then, is interested primarily in man in his relations to others, and not in man by himself. Moreover, as a science which studies the present in order that it may predict and prepare for the future, and discovering that interdependence is the law of progress, it must not hesitate to shape its principles with reference to a solidarity which shall grow more rather than less, stronger rather than weaker.

Economics treats of Man as in Process of Development. — Few truths are more easily admitted or more persistently ignored than that of change in human life and condition. History makes it real. Man now wanders about by force of necessity and age-long habit, now starves rather than be moved from his home. Land is now free to all, now parceled out with well-nigh absolute right of individual possession. The seemingly eternal features of the social structure are gone in a few generations. Nothing so invalidates theories, laws, general

principles, institutions, and enterprises as this great law of change of which we seldom take full account. Take, for instance, bequests. Nothing is commoner than for a man to leave a legacy under specified and detailed regulations, binding for all time. One leaves money to endow a religious service in a language which in a few generations no one understands; another founds a college to teach certain doctrines which in a century no one believes; and so on indefinitely. These and a thousand other laborious efforts of statesman, warrior, or philosopher quite lose their worth for the future because their authors assumed that the future would be like their present. Even the wages system and the division between capital and labor which seem rooted in the constitution of society are scarcely two centuries old as a general system. One must never forget in the study of economics that the phenomena with which it deals are pervaded by the spirit of life, moving forward or backward, progressing or decaying, under those influences which control the rise and fall of social institutions. The science is biological rather than mechanical.

The Laws with which Economics Deals. — The evolutionary character and complexity of economic phenomena, which account for much of the charm of the subject, endow it also with unusual difficulties. Conclusions true for one generation are invalid in the next. Terms and definitions appropriate to one stage of industry are misleading in a succeeding stage. Generalizations valid for one nation and government are inapplicable to another. Even those laws or uniformities which the science prizes as the finest product of its research are but statements of probabilities — declarations of what is most likely to occur for the mass of men in the long run under certain specified circumstances.

In no department of knowledge, consequently, is there greater need of temperate statement and of that humility of mind which is the surest safeguard against bigotry and dogmatism. No system of economics is applicable unchanged to all times and all places: the premises of the arguments change; the ingredients of nearly every problem present themselves in different proportions; and the conditions of almost every question vary from

country to country and from generation to generation. The student must not expect rules of thumb by which he can decide offhand the economic problems of the particular city or country district in which he is for the moment interested. No general treatise on economics can authoritatively decide the practical problems of particular times and places; although the economist, before all other students, is forced to deal with practical problems. What such a treatise can do is to point out mistakes of logic common in the current discussions of economic questions, call attention to obscure factors — sometimes of great importance — which the practical man is likely to overlook, give solutions of typical problems which are likely to arise, and thus afford a training which will assist the student in solving practical problems for himself.

The peculiar and distinctive office of the economic scientist, however, is to emphasize the less tangible truths, the remoter consequences, the deeper and consequently less obvious forces of economic society. The impulses of the moment, the immediate demands of the hour, the present "fact" that stares us in the face (and sometimes blinds us), are not likely to lack vigorous champions; and to preserve the balance there is need of a craft of thinkers far enough removed from the battle to preserve the wider outlook, mindful of the lessons of the past, jealous for the rights of the future, insistent upon the less obvious truths. This is why economics so frequently appears to the practical man strained and academic. This impression arises from a difference of emphasis which in the main is as salutary as it is inevitable. The academic quality of the economist's work arises sometimes from ignorance, sometimes from pedantry, but more frequently from his courageous insistence upon the importance of the less tangible truths and the distant consequences of present action.

Is not economics, then, a science based upon natural law? The question is largely a verbal one. What do we mean by natural law? In the narrowest sense natural laws are the habits of nature which are subject to absolutely no variation. Such are gravitation and chemical affinity; and the sciences based upon such laws — astronomy, physics, and chemistry — were the first to develop, and have attained a maximum degree of exactitude. The term "science" is sometimes used in a way to imply only sciences of this character. These sciences are more properly known as *exact* sciences, and they are characterized by the fact that the relations with which they deal can usually be expressed quantitatively.

When we come in contact with life, however, and especially with its higher forms, the exactness with which an astronomer

predicts an eclipse or a chemist anticipates a reaction becomes impossible. Not that life is without laws; very far from it. There is, in the first place, the basis of physical nature, with its perfect regularity, upon which all life rests and to which it must conform. Then, too, there are laws governing life directly and pertaining to it. These form the subject of the group of sciences known as biology. We must remember, however, that all we can say of natural laws is that they are *habits*, apparent regularities or uniformities in the succession of events; not, so far as we know, compulsory necessities of nature. And the laws of life seem to differ from those of inanimate nature in that they are not quite invariable habits. Variability seems to be inherent in life, increasing as life rises in the scale of development. It is often assumed, to be sure, that these laws are as invariable as any other, and that this seeming variability is only a greater complexity which we do not yet understand. However that may be, the result is the same for the present. The sciences of life are not exact in the sense we have defined. We must further note that in so far as a science deals with facts which seem to be governed by no invariable law, or whose law has not been discovered, it must content itself with a *description* of this part of its subject. Thus we have the term "descriptive science." We might better speak of the descriptive part of a science, for all sciences are able in part to reduce their facts to law.

What has been said of the sciences dealing with life applies to an even greater extent to those sciences which deal with man. It is true that within certain limits man is governed by absolutely invariable laws. He is as much bound by gravitation as anything else, and if he falls over a precipice, we can predict the results as certainly as though a stone fell over. But, without entering the bog of discussion as to the nature of human freedom, we may safely assume, for practical purposes, that man is also, within certain limits, a law unto himself. Nowhere do we find an element of variability so great and so seemingly ultimate as here. We must remember, therefore, that the sciences which deal with man deal with a being who is modified

by his environment, *but who has the power of modifying that environment by his own conscious effort.*

Let us consider very carefully what this means. It does not mean simply that man modifies his environment *because* he has been modified by it and so reacts upon it, just as things do when they come in contact. If we accept this view, we shall come to Herbert Spencer's theory of natural selection. The forces at work accomplish their own results, according to this theory, whether man will or will not, simply by natural action and reaction. This implies that man is modified by his environment, and that he in turn modifies that environment *without conscious effort.* This theory is based on an assumption that man has no power of *initiating* an influence, and consistently concludes that social development, like geological development, must be left to work itself out. Spencer, however, goes farther, and stoutly maintains that man, by conscious effort, especially by collective or state effort, not only does not help this development, but actually hinders it. In this the whole theory is abandoned, for it is plain that if man by conscious effort can hinder a process, he can help that process in the same way, if he only has enough wisdom and sense. These it is the purpose of science to give him.

In opposition to the theory of natural selection, or unconscious development, has been urged the theory of artificial selection, or conscious development. Ages of natural selection made of the potato a lean, watery, unpalatable tuber; a relatively few years of artificial selection made it a valuable food product and a table delicacy. Compare the development of domestic animals in the last few years, under man's conscious guidance, with their slow and meager development in a state of nature. Man has precisely this power of consciously modifying the natural and artificial elements of his environment, and this power continually enlarges.

So, when we ask if economics deals with natural laws, we really ask whether this being, whose activity in a certain line we are studying, is governed by such laws. If we mean by this to ask whether his action is characterized by absolutely

invariable habits, like the forces of physics, we must plainly answer, no. If man had no power of initiative, or, on the other hand, were so perfectly rational as always to do the wisest thing, there would be a regularity in his action which might perhaps form the basis of a complicated, but exact, science. As it is, all social sciences are approximate and partly descriptive. There is much in man's action which is exceedingly (though not perfectly) regular, and hence we have general, though apparently not invariable, laws. There is a part of his action, however, that seems as yet to be capricious, and we can only make note of it till we have more knowledge.

The laws of economics are not comparable to the laws of inanimate nature in invariability, but they are of very general applicability, and are wholly in line with the action and intent of nature, and are, in this sense, "natural." But the laws of economics are not natural laws in the sense in which the word is often used; namely, laws external to man and not at all the product of man. The laws of economics have been designated as social laws to distinguish them from those of physical science. Social laws describe tendencies, or regularities, which appear especially in the consideration of large masses of facts. Human mortality serves as an illustration. When and how a certain man, as A., will die, is proverbially uncertain; but when we speak of hundreds of thousands of lives, we can predict with such an approximation of accuracy that the vast business of life insurance can be built upon the regularity of the action of death.

The foregoing discussion enables us to answer in a word the much-mooted question, "Is economics a science?" It is not an exact or mathematical science, though certain portions of the subject may possibly become so. It is an approximate and partially descriptive science, like all sciences dealing with man, or even with life. The inexactness of the social sciences is due to the very thing which gives them their supreme value, the nature of man and the greatness of their subject.

The Relation of Economics to other Sciences. — We have already referred briefly to the relations between economics and some of the other sciences, but the topic is one which re-

quires fuller treatment. In one sense, economics may be said to be dependent upon practically every other science, since the discoveries in every field of knowledge almost inevitably react upon the economic life of man. Modern chemistry, to take a single example, has revolutionized some industries, wholly created others, and, through the agency of the pure-food laws, may claim most of the credit for entirely suppressing others. From psychology economics takes the axiomatic principles upon which the laws of value rest; from physical science the law of diminishing returns, which plays a very important part in the theory of distribution; and from mathematics the methods by which to ascertain how insurance may be safely supplied against accidents, death, and loss by fire. But it is to the sister sciences dealing primarily with man that economics is most vitally related.

Man has been busy from the first in several lines of effort. He has talked, worshiped, fought, studied, and each of these lines of effort has developed its own faculties and institutions. For convenience we may arrange these in eight groups, as follows: language, art, education, religion, family life, society life, political life, economic life. Each of these is the subject of a science more or less developed. The group of society life — that is, the life of polite society, calls, parties, balls, and the like — has been studied but little, and we know few of its governing principles.[1] Language, on the other hand, has a science which has attained to very complete development. The rest lie scattered between these extremes.

A peculiar feature of these activities is that they are all of them *collective* activities, activities which one man cannot well carry on alone. This is obviously true of family and political life, language, and others; and on careful examination it proves to be true of the rest. It is now admitted, after many experiments, that art and even religion do not thrive in solitude. It

[1] An attempt to examine scientifically some, at least, of the phenomena of polite society has been made by a learned jurist, the late Professor Rudolph von Ihering, in his *Zweck im Recht*. Professor Thorstein Veblen in his *Theory of the Leisure Class* gives a brilliant though half-satirical explanation of social conventions in terms of origins and survivals.

would seem that if a man could do anything by himself, it would be to get a living; but the study of economic history impresses us with the insignificance of all such effort and the inevitable tendency of men to drift together in their economic activity. If it were possible for men to live in isolation, every one of the eight lines of effort we have mentioned would soon dwindle into insignificance or altogether cease. So these sciences are all of them social sciences; and as the sciences that deal with life are now grouped together under the name biology (science of life), so the social sciences may be grouped under the title of *sociology*, or the science of society, although some sociologists do not define the word "sociology" in this broad sense of an all-embracing science of human association.

Economics, then, is a branch of sociology thus conceived. We have already defined it as the science which treats of those social phenomena that are due to the wealth-getting and wealth-using activities of man. We may speak of the wealth-getting and wealth-using activities in all their relations as economic life or economy. Accordingly, economics is the science which deals with the economy of man. A useful distinction in language is thus made between economy, the life itself, and economics, the science dealing with that life. If this distinction could always be observed, much confusion would be avoided.

We have economies of various sorts: the economy of an individual, of a family, a tribe, a city, a state, or a nation, and we have, correspondingly, many economic units. The dominant unit in ancient Greece, for example, was the household, which included the family and all the slaves and other dependents. These lived together and formed a little group by themselves. The economic life of Greece meant, largely, a sum of the economic activities of these households, each of which strove to be sufficient unto itself. It is interesting to know that many a well-managed Southern plantation before the Civil War endeavored to produce nearly all the means of life on the plantation, and in this respect, as in others, resembled a Greek household. But as time has progressed, these old groups have been partially dissolved, and in many instances in modern

times the individual, in his economic activity, constitutes a unit, although the family is still the prevalent economic unit. It is a natural outcome of economic progress, as already explained, that the relations between these units have multiplied indefinitely in number and in importance. This is simply another way of describing the growing interdependence of men. Economics deals especially with the mutual relations of economies of all kinds, private and public. It is chiefly, if not exclusively, a science of human relations, and without these relations could not exist.

Because of the organic connection of these relations in their common origin, man, and because economics deals with the individual as he is, and not with an artificially simplified "economic man," it is impossible wholly to dissociate the social sciences, and particularly impossible to divorce economics completely from ethics and politics. This does not mean that these sciences are all one and cannot be profitably subdivided. On the contrary, because of the limitations of the human mind, they must be studied separately so far as is possible. Scientific progress, like industrial progress, comes largely through specialization and the division of labor. Man cannot profitably study things in general. What it does mean is that there is some territory common to all these sciences, and that occasionally the economist is forced to pass ethical judgments and to decide political questions. In the consideration of railway rates, for instance, the economist may be compelled to pass judgment upon what is just and reasonable, and he discovers upon investigation that by common consent what is fair or reasonable must be decided largely upon economic grounds. The same is true of the apportionment of taxes, in which subject ethical, legal, and economic questions are inextricably interwoven. Commercial policies, restrictive regulations, and sumptuary laws have been the very stuff and subject-matter of the science of economics from its first beginning. In analyzing the progress of the past or the conditions of the present, we are forced to pass judgment upon the success or failure of many laws and policies which are still in force or under active dis-

cussion. Many of these must be indorsed or repudiated either solely or largely upon economic grounds; and because of these facts, the economist cannot, even if he would, refrain from passing judgment upon laws and political policies. Nevertheless, as was stated before, economics does not undertake the complete and systematic study of law, ethics, and politics, and its conclusions must almost always be supplemented by non-economic considerations which the economist may not have taken into account.

Principal Divisions of Economics. — This view of the inevitably practical character of economic science is carried out in the treatment of the subject in the following pages. The history of the evolution of economic society, sketched in Book I, is followed, in Book II, by a discussion of the production, consumption, exchange, and distribution of wealth. These subjects are treated in close connection with those illustrative economic problems of which the so-called "economic theory," at its best, is but a more comprehensive and consequently more abstract analysis. Book III has been reserved for the subject of public finance, and in an appendix is given a brief sketch of the history of economic thought.

QUESTIONS

1. What is the most essential characteristic of economics? Define economics.

2. Is man or goods the more prominent thing in economic study? Does economics teach the student how to succeed in business?

3. What determines ultimately whether a man is poor or not? What kinds of poverty are there?

4. What is meant by "dear labor"? Is it a good thing for society in general? for employers in general? for an individual employer?

5. What is the difference between natural and artificial selection? Which applies to human society?

6. Are practical ethical and political judgments the chief ends and products of economic science?

7. Is economics concerned with the negro question? bank notes? prohibition? anti-trust laws? race suicide? protection?

8. What is a scientific law? Contrast with a statutory law; with a moral law; with the laws of mathematics.

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CHAPTER II

THE CHARACTERISTICS OF THE PRESENT ECONOMIC SYSTEM

Our Environment. — Lying back of all of our economic activity is the fact that we live in an environment in which the things that we desire are not furnished spontaneously in unlimited quantities. Whether it be looked upon as due to the niggardliness of nature or to the insatiability of human wants, the fact is that, for the most part, the material things that we use must be economized. We must put forth effort and exercise self-denial in order to enjoy the good things of life. Those human arrangements which help to determine how much of effort, of self-denial, and of enjoyment is to fall to the lot of each of us are the characteristics to which we now turn our attention. There are, however, a number of social institutions which do not fall within the scope of the present chapter. We deal here only with the social conditions directly underlying our economic activity, which is but one aspect of our social life. We must leave to the sociologists and other students of society a discussion of such topics as the family, religion, morality, ceremonial institutions, and the nature of government, although, to be sure, these also have their effect upon the economic sphere and are in turn affected by it.

Private Enterprise and State Activity. — We live in an age when private enterprise, for the most part, is relied upon to furnish us with the necessities and enjoyments of life. The cultivation of the soil, the exploitation of the mines, transport, the various stages of manufacture, and the distribution of the finished product are all left mainly [1] to private initiative. The

[1] This applies especially to the United States and England so far as transport is concerned; it would not hold true of every country.

discovery of new processes, invention, and experimentation are carried on mostly by private individuals or corporations who take upon their own shoulders the risk of failure. The State, on the other hand, participates in this activity in a variety of ways. It maintains order, promotes the public health and safety, provides roads, and takes complete charge of some industries. In its educational institutions the State, through its agents, undertakes various experiments, and encourages the growth and diffusion of knowledge, an indispensable condition of continuous advancement in our economic life. The state university and the experiment farms may be mentioned, and also the large and extremely useful Department of Agriculture of the United States, with its annual expenditure of about twenty million dollars. Certainly in the vast majority of the enterprises with which we are familiar, private and public activities are combined in varying proportions.

In speaking of "State" activity, the reference is to organized society acting through any one of the various governmental agencies, such as the township, city, or national governments, and not merely the political unit which we know in this country as the state government. The term "governmental activity" is sometimes employed but is less desirable. The word "government" suggests to the ordinary mind a power apart from and superior to the people — a restraining or punishing power — whereas the modern concept of the State is that of a coöperative institution, maintained to safeguard and promote the general welfare. "Private" activity, it should be noted, is a broader term than "individual" activity. It includes all forms of joint or associated action except those which constitute the activities of the State.

Let us take the case of an industry which is as nearly private, perhaps, as any we can find — that of agriculture — and notice the part which public activities play in securing the farmer's result. First, we may say that the farmer owns the farm that he cultivates; this is private property. But how comes it that the farm is his? Why does not a stronger man drive him off and take the farm himself? Plainly because the State protects him in the possession of the farm. When he bought the farm, he took his deed to a government official, who recorded it, and thus gave him an additional guarantee of possession. A neighbor's dog

kills his sheep, and an appeal to the State compels the neighbor to redress the grievance. Another, far below, dams a river and backs the water up so that it overflows his land. Another appeal to the State removes the dam or secures compensation. When wheat is raised, the farmer hauls it to market by a road built, not by private, but by public, activity. The railway lowers the price of his wheat by a discriminating rate, and again government interferes in his behalf. But manifold and important as are the regulations of the government, State activity seems very much restricted when we reflect that it might extend over the entire industrial field. Today the distinctive characteristic of our economic life is private, not public, enterprise.

Division of Labor and Exchange. — It is commonly taken for granted that every man should prepare himself for some special occupation, that one should plow while another builds or sings. Hardly any civilization seems possible without some industrial specialization, but our own age is peculiar on account of the extent to which this has been carried. The introduction of machinery and the development of large-scale production have split up the work of men so minutely that the products which they turn out are not only of no immediate use to themselves in most cases, but they are also useless to any one else until combined with the results of other men's labor, often performed years before or afterwards. It is a long and complicated process from the man who mines the ore which is to reappear in a steel plow, to the man who bakes the bread. This specialization of employment has some far-reaching results:

1. It implies the exchange of goods. If we produce things we do not need, we must find some one else who does want them and some one who has the things we desire. Money, banks, and transportation agencies could largely be dispensed with if each family produced for itself alone. There would be none of the complex problems that center about the question of how much each of us is to receive in exchange for his services. One of the striking characteristics of this process of exchange is the great extent to which it is automatic. There is no government official whose business it is to discover how much of each commodity

will be needed, and to direct that that amount shall be produced.[1] Men are legally allowed to engage in almost any undertaking that attracts them, and yet we take it for granted that somehow things will get produced in the proper proportions. A hundred men are set to work in a factory making nothing but hats, many more than they or their friends can use, but the manager has faith that heads will be found to wear them all. Farmers confidently proceed to raise wheat, never troubling themselves about the grinding and baking. Neither workmen nor employers in general know why wages are as they are. Men lend money or goods, now for one price, now for another, but few know why they demand interest or why the rate changes. These processes go on visibly before us, but the governing laws are hidden except to the careful investigator. In this respect they are like the laws of physiology. We eat and digest our food, but how many people know how or why digestion takes place? It is easy, however, to overemphasize this idea, for a great deal of our economic activity is conscious and volitional. When we decide to make a law or levy a tax, we do it consciously, considering arguments, and finally will to do the thing in question. And even in business undertakings there must be much careful study of the probable demand for various kinds of goods and of the most economical ways of producing them.

2. The specialization of work and exchange of goods just referred to necessarily imply that mutual dependence briefly considered in the preceding chapter. Instead of a number of distinct, self-sufficient units, we have a coherent society where one individual relies upon many others to complete his own one-sided economic activity. A strike of street-car employees, or of teamsters, or the destruction of an electric lighting plant, would each send a shock of inconvenience through a community. A prolonged railway strike would be felt as a national misfortune. Indeed, this interdependence is international in its scope. England relies on other nations to send her food in exchange for her

[1] The government does help, however, by collecting and publishing information, such as crop reports, statistics of the amount of cotton ginned, consular reports as to opportunities in foreign markets, and in various other ways.

manufactured products, and many a German workman would be in distress if our exports of cotton or copper should suddenly cease, as is happening in the great European War, in progress at the time that this is being penned. The United States is more self-sufficient economically than many other nations, but we are nevertheless dependent upon international trading for our supplies of many things.

Economic Classes. — In part, also, the specialization of work is responsible for the division of society into classes, but only in part. The differences in the work of the carpenter, machinist, and railway brakeman do not result in the formation of classes of a higher and lower rank. On the other hand, the professional brain worker enjoys some social esteem that does not fall to the lot of the manual worker. But doubtless the most important basis of social classification is the possession of wealth. The power to spend freely, while not the only test, is today the most widely recognized test of social status, regrettable as this may be.

Private Property. — We proceed now to examine the foundation stones of this system of private enterprise. Private property is the most important of these. For our present purpose we may define private property as the *exclusive control over valuable things by private persons*. It is to be distinguished from mere possession. The possessor has the use of the thing for the time being, but unless he is at the same time the owner, he is dependent upon the will of another for the use of it. Ownership implies the right of excluding other persons from the employment of a thing. The exclusive right must be recognized and guaranteed effectively by third parties. If the exclusive right of control over some valuable thing is asserted simply by the strength of one's right arm, the right of private property is not thereby established. The exclusive right of control must be recognized by others and must be maintained by them.

Over against private property we have public property, and there are some things, such as air, which fall in neither of these categories. The sphere of private property at present includes, not only food, clothes, and other things of personal use, but also the instruments of production — land, buildings, and machinery.

In the most important productive processes the tools are in general not owned by the persons who use them.

It may be said that property is the chief seat of social authority. As property carries with it the exclusive right to control things, others may have access to these things only on conditions named by their owners. If we look about us, we find men organized and acting together under direction for purposes of production. In a factory we find an organization of men like that of an army. We discover men moving here and there and performing arduous tasks in obedience to command. If we examine the nature of the authority which some thus exercise over others, we shall find that it resides in property. The law of the land to some extent establishes the authority of man over man; but where one man obeys another because the law in so many words tells him to do so, we find a hundred men obeying others because these others have the authority which resides in exclusive control over valuable things. Indirectly this latter sort of authority rests back upon the laws in so far as these are responsible for the establishment of property. But the chief seat of authority in society is based only indirectly upon the government; it rests immediately upon private property.

The right of private property is one so fundamental in our modern life that we scarcely think of it as a creation of man, maintained by constant vigilance on the part of the State, and subject to human modification. It seems like bed rock, an ultimate right, needing no other justification than its own obviousness. When a custom has obtained very widely and is deeply rooted in human life there is often a tendency to claim it as a "natural right." But the right of private property as we know it now did not always exist. It has not always been so extensive or exclusive as at present. This is especially marked in the case of individuals, whose claims as opposed to those of the tribe were at first slight and vague; but these claims gradually grew, especially in the case of the chieftain, until tribal or communal rights broke down before them. The time was when a Scottish clan had absolute right to the territory it occupied, and no chieftain, however powerful, could have abridged that right. Now there are beautiful tracts of country in Scotland which are almost denuded of their agricultural population because the owners, the descendants of these same chieftains, preferred to raise game on their estates. All are familiar with the liberty generally allowed in this country of hunting and fishing on private estates. This

is unheard of in Europe. Slowly, however, we are extending our property claims to game and fish, and the former leniency of ownership is disappearing.

But the modern State is continually placing limitations and restrictions on the right of private property. Our cities regulate the height of buildings and prescribe the material from which they must be made and the kind of plumbing which must be installed. Restrictions of the uses to which land may be put are common, and no one can use his property in ways that constitute a public "nuisance." The nature and extent of these changes in private property must be controlled by the State in the public interest. How far interference with the right is justified cannot be discussed in general terms: such a discussion must deal with the specific problems of municipal ownership, railway regulation, and innumerable others. The point to be emphasized here is that in solving such problems the mere fact that a proposed solution restricts or enlarges the right of private property cannot in itself be given much weight.

Trademarks, Copyrights, and Patents. — These are legal arrangements whereby exclusive privileges are awarded in return for certain services to society. These privileges become a special form of private property. Their justification lies in the fact that they are a means of promoting "the progress of science and useful arts." It must be remembered, however, that all such progress is a historical product. The telephone, for example, was preceded by a century of scientific invention and discovery, most of it poorly remunerated. The telegraph was, similarly, the result of the careful plodding industry of scores of men. Professor Henry, of Princeton College, whose services in connection with the completion of the telegraph were most distinguished, conscientiously refused to take out any patent. It often happens that several persons almost simultaneously and independently make the same discoveries and inventions. Our patent laws seem frequently to reward the man who makes the finishing touches which lead to the utilization of a long line of work. But it is the hope of being the one who may give the practical turn to an idea that lures many a man on to undertake the laborious

task of doing the extensive experimentation often necessary to place an article on the market.

In order that patents and copyrights may not become the bases of burdensome monopolies, they are of limited duration. Patents in the United States run for seventeen years, and copyrights for a period of twenty-eight years. Copyrights may be renewed for another term of the same length. These legal privileges have resulted in an enormous amount of litigation and have given rise to special problems. One of these is the question of the extent to which the manufacturer of a patented article should have the right to control the price after the article has left his hands. It is frequently asserted that owners of patents should be compelled to permit other persons to use them upon the payment of royalty, so as to promote competition in manufacture. But there is some danger that such legislation would defeat the primary object of the patent system. Even with the exclusive right to manufacture an article it frequently requires a long struggle to make an invention a commercial success. It has also been suggested that the United States government should reserve the right to purchase a patent, but it is improbable that this right, if reserved, would be often exercised.

Inheritance. — Inheritance is often regarded as a necessary part of the right of private property, and it is true that the entire abolition of the right of inheritance would result in a great enlargement of public property at the expense of private property, unless gifts were used to replace inheritance as a means of transferring property from one generation to the next. But, in truth, property and inheritance are two distinct rights. Private property is an exclusive right of control, whereas inheritance is the transmission of this right from one generation to another.

As in the case of private property itself, the right of inheritance is not recognized today as absolute. Detailed regulations exist on our statute books regarding the making of wills and regulating the descent of property where no will is made, and there is an increasing tendency to limit the right of inheritance by taxation. That which seems a mere natural right at one time seems a wrong at another, as is illustrated in the changing ideas and practices

concerning the share of a father's estate to be inherited by the oldest son.

Contract. — Hardly second in importance to the right of private property is the right of contract, for the maintenance of which we are equally dependent on the State. Some sort of contract lies at the basis of all associated activity. To secure the condition of such activity, it is necessary, first, that men should be allowed to bind themselves; and, second, that they should be compelled to abide by the agreement thus entered into. The entrance into a valid contract is ordinarily voluntary, but once entered into with due formality, the State will use its superior power to enforce it. To the anarchist this seems oppressive, and it is true that a state of society is conceivable in which the element of force might be removed from the idea of contract, but something else would have to be substituted to make the keeping of agreements the general rule. There are doubtless many people living today with whom the feeling of honor or the fear of social disapprobation would be sufficient for the enforcement of contracts, just as these persons might not need the threat of a jail sentence to keep them from stealing.

The economic ties which hold men together in industrial society are, on their legal side, very generally contracts. The organization of an industrial corporation implies many contracts. Our property is acquired very largely through contract, and through contract we determine the conditions under which we do our work, such as the length of the working day. The continuity of our economic life rests upon contracts, which bind together past, present, and future. Still, all that we have by no means comes to us through contract. "Contract" does not exhaust the significance of parentage, home, and education, and much wealth changes hands through gifts and inheritance.

Laws are frequently enacted regulating contract in the general interest. This is especially marked in labor legislation, which will be discussed in another chapter. Certain contracts cannot be enforced by law, because they are held to be against public policy, as, for example, gambling contracts and contracts in restraint of trade. In some cases statutes make it illegal to enter into such contracts.

Vested Interests. — A few words should be said about vested

interests.[1] Vested interests are legally recognized pecuniary interests which cannot be impaired by public action without indemnification. Vested interests generally arise through property and contract. Outside of property and contract, however, there may be vested interests. Leeds was compelled by a feudal arrangement to grind its corn, grain, and meal at the lord's mill till well on in the last century, and finally had to pay £13,000 to terminate this obligation. When Prussia bought the railways, the railway presidents were indemnified for the loss of their positions by large payments; in other words, their offices were looked upon as vested interests. England is the classic land of vested interests. An office in the army was until recently looked upon as such, and so was an appointment in the established church. It is generally held that keepers of public houses in England licensed to sell beer and spirits have a vested interest in their business, so that they must be indemnified if their licenses are taken from them. Workingmen have frequently claimed that they have a vested interest in the advantages which their skill in their trades gives them, and that if through industrial changes this skill ceases to be of as great value as formerly, they ought to be indemnified and in some way their former income continued. This claim of the workingmen, however, unlike many other claims put forward in the name of vested interests, has not received recognition, either by Parliament or the courts. Vested interests, apart from property and contract, are of less significance in the United States than in most countries, but they may become of more significance in the future.

Freedom. — The freedom to do certain things is legally guaranteed at the present time, such as moving from one part of the country to another, choosing one's own occupation, and acquiring property. These, together with the absence of slavery and of imprisonment for debt, are characteristic features of the present economic order as distinguished from past conditions. The right to manufacture and sell what and when one pleases is also comparatively recent. It has often been greatly limited by despotic governments, and has been made a matter of sale for

[1] The term "vested rights" is also used.

the purpose of raising revenue. Such limitations gave rise to many abuses, and our own time has seen the abolition of an immense number of hampering and vexatious restrictions often designed for extortion rather than for the promotion of private enterprise. So far as the absence of legal restrictions on the actions of individuals is concerned, the past century has been distinctively an age of economic freedom.

Restrictive laws, however, are not the only limitations on economic freedom. The system of private property itself means that certain individuals in the community have power to command other people to work, and the lack of an income under our present régime implies the lack of the real freedom to do things. The cost of a railway ticket may be quite as effective as a legal barrier would be in preventing movement from one state to another. We say involuntary servitude, except as punishment for crime, has been abolished, yet men are compelled to work by the threat of economic distress, in most cases quite as effectively as by means of the slave-driver's whip. Again, the choice of an occupation is free according to the law, but we may find that a long and expensive course of training is necessary, or trades-unions effectively limit the number who can learn a given trade. The right to establish enterprises is granted to all alike according to the law, but today most persons would find it difficult and hazardous to embark upon the refining of oil or the manufacture of steel. For most men, the freedom to establish new enterprises has been growing less and less in this era of large-scale production.

This leads us to a distinction between what have been called *negative freedom* and *positive freedom*. Mere absence of restraint (negative freedom) is one thing, and the power to develop our activities to the fullest extent (positive freedom) is a very different thing. Legal restrictions may actually be the means of increasing positive freedom. Thus, a library placed at the disposal of the public without rule or regulation would result in a smaller total utilization of the books than one in which the observance of certain rules is strictly enforced. All laws which limit the power of the strong to oppress and which help to open

the gates of opportunity to all must of necessity increase positive freedom. The newer idea of freedom aims at the development of such social arrangements that sane and complete lives will be possible for the largest number of persons.

Competition and Markets. — As a result of the legal conditions that have been mentioned, we find men engaged in many kinds of rivalry. Our economic society is often called " competitive " for this reason. But this term does not apply to all forms of rivalry, for economic competition is based on private property and free contract. There might still be conflicts between races and nations if private property and free contract were abolished. The men of any single nation might still vie with one another to prove their superiority in the eyes of womankind or to gain positions of public honor and power. The kind of competition which is distinctive of the present economic order is the all-pervading endeavor to obtain the largest possible amount of wealth in exchange for commodities produced or services rendered. If we except the idlers, the parasites, and the cheats, men are everywhere endeavoring to discover what other people urgently want, and then to satisfy these wants in the most efficient manner possible. Moreover, they attempt to give as little as possible of their own products in exchange for the things they themselves desire. Business competition thus has two sides: rivalry in rendering a service, and alertness in exacting a return. Each individual takes part in the competitive contest in two ways: first, as a seller of goods or services, in which case he finds that others are anxious to render the same service; and second, as a buyer of the things he wants, in which case he finds that these same things are sought by other people.

The intensity of the competitive struggle is subject to a good deal of variation. At times it may be characterized as cut-throat, where the slashing of prices has for its object the elimination of one or more of the contestants. But in most lines of endeavor many competitors may continue to exist side by side indefinitely, each being confronted by the ever present threat that, if his service becomes very poor, some other man will outstrip him. Various as may be the character of competition, now

predatory, now a friendly rivalry, there is no resting place in the contest unless one secures some special privilege as a shelter. He who is energetic, and wins success in a certain line of business, must continue to defend himself from a host of imitators who are anxious to snatch his gains from him. Most of the competitors are successful in getting something, some more than others, but many fail altogether. These last, the inefficient, whether made so by sickness, by inherited weakness, or by lack of proper training, fall by the wayside and must be cared for by private charity or by the State. The process is cruel in many of its details, but there is also a beneficent aspect in its sifting out of the incompetent and in its encouragement of the strong.

Here, again, the automatic character of the present industrial system manifests itself. It is through competition and bargaining in the market that the prices of goods and services are fixed, and it is to the variations in these prices that men look for indications as to what people want. Price is the universal barometer that indicates changes in the demand for goods of all kinds.

Fair Competition. — Competition has been spoken of as a struggle, a contest, accompanied by success and failure, elation and disappointment. But the State sets limits to the rivalry, — it makes regulations and acts as an umpire to compel fair play. It attempts to eliminate fraud and brute force; it trains the rising generations for an entrance into the struggle by a system of free education; it insists that no person shall sacrifice the life and limb of another in the rush for wealth; and it protects children and women when they seem compelled to labor under unhealthful conditions. Those who fail entirely in the struggle it tries to rescue from suffering. Libelous and fraudulent statements about a competitor's business are illegal. So are efforts to induce his customers or employees to break their contracts with him. Competition designed to drive a rival out of business is illegal, whatever its methods, if it is prompted by sheer malice or is part of an effort to establish a monopoly. The Federal Trade Commission, established in 1914, is empowered to issue orders restraining the use of unfair methods of competition by persons engaged in interstate commerce. In short, the State aims to

raise the plane or ethical level of competition, changing it from brutal warfare into a contest in which there are prizes for all, but in which the prizes are graded according to the energy and ability of the contestants.

Coöperation. — The statement that our age is one of competition is misleading if it gives the impression that every individual is always struggling against all of his fellows. On the contrary, the achievements of modern industrial civilization would be impossible without a far-reaching coöperation between individuals. Employers and employees may quarrel and bargain about the wage contract, but when they have settled their relations for a week or a year, they become coöperators for that period in the conduct of the business enterprise in which they are engaged. Again, there is an unconscious coöperation between those who work upon a commodity in the different stages of the process from raw material to finished product. The division of labor itself is coöperation on a splendid scale. Competition merely determines the conditions on which the coöperation takes place. If these conditions could be determined in some other manner, it would be possible to conceive of the elimination of competition from our industrial system, but coöperation itself is so vital and fundamental that its elimination would mean a return to barbarism.

Monopoly. — Everywhere in the industrial field the tendency toward monopoly is present. Business men endeavor so far as possible to shelter themselves from the effects of the competitive struggle by means of some privilege, but if none is to be found, and if competition becomes very keen, they endeavor to combine with other business men. But while this attempt to escape competition is universal, it is only under certain conditions, not generally present, that it is at all likely to succeed. The possibility of success is least in agriculture and in mercantile business, where new enterprises are started rather easily because no special privileges stand in the way and because no very large capital is required to work efficiently. It is greatest in mining and transportation, where special privileges are present and where large fixed capital is required. Scarcely anywhere is it possible wholly

to escape competition, and we are still warranted in speaking of the present era as a competitive rather than a monopolistic age.

Side by side with the growth of monopoly there is an increase in government control of industry. The desire of the business man is to be uncontrolled, but wherever he succeeds in throwing off the control exercised by his competitors, he inevitably substitutes that of the government.

Custom. — Custom plays an important part in our economic activity as well as in every other department of social life, although its sway is not so marked as in former ages or among primitive peoples. The custom of giving gratuities, or *tips*, to servants is in many places so strong as to have almost the force of law. Again, today much of our personal expenditure is controlled by what custom has declared to be proper rather than by any act of our own individual reason. Any attempt to lower wages which would make impossible the maintenance of a customary standard of living would be stubbornly resisted. And, as we shall see in a later chapter, the "good-will" of a business, which is often a durable source of business profits, is built up, in large measure, on its ability to get people into the habit or custom of trading with it. Custom is the result of habit, and is continually broken into by our tendency to imitate a leader who proposes a new line of action. While custom may have its beneficent aspect in preventing hasty and impulsive changes, it frequently retards progress and causes our legislation and judicial decisions to lag behind industrial development.

QUESTIONS AND EXERCISES

1. Give further illustrations of the difference between positive and negative freedom.

2. Describe the property relations existing in the Amana Society, or in other communistic groups.

3. What regulations concerning the inheritance of property are in force in your state?

4. To what extent are gambling contracts valid? Why does the law differentiate them from ordinary business contracts?

5. Compare the legal freedom of workingmen today with the conditions described in the *Wealth of Nations*, Book i, Chap. x, Part ii.

6. Compare the rights of patentees in *Bauer* v. *O'Donnell*, 229 U. S. 1 (1912), with those allowed in *Henry* v. *Dick Co.*, 224 U. S. 1 (1911).

7. What do you regard as "unfair" advertising? Give examples.

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CHAPTER III

THE EVOLUTION OF ECONOMIC SOCIETY

The evolution of economic society is but one of many points of view from which the development of mankind may be considered. The history of literature, the history of government, the history of religion, each treats of man in one line of his activities. Many thinkers have considered the economic activities of mankind as the one fundamental factor in social progress, determining in the long run even our moral and religious ideas. But human life is complex, and it is improbable that any simple explanation suffices for all of its aspects. The economic factor, however, is clearly of fundamental importance in the sense that the higher things in life cannot be gained if man's entire time is spent in getting a mere subsistence, so that economic progress, or increasing control over the forces of nature, must accompany general social advancement, at least for the mass of the community. Under primitive methods of production, only a select few can have the leisure which is a necessary condition of a high standard of living. The greater the total social product, the better the possible satisfaction of the true economic wants of all; and, other things being equal, the more satisfactory the foundation on which to rear a high democratic civilization.

The Economic Stages. — Many attempts have been made to divide economic history into different stages through which mankind passed in arriving at modern industrial civilization. These attempts have been the subject of lively criticism, but it appears that the classification which in the past has been most widely used is still, with some modifications, the most serviceable, and in the main, this will be followed in the present chapter.

The basis of this classification *is the increasing power of man*

over nature. This is the fundamental fact in man's economic development, and his position in the scale of economic civilization is higher in proportion as this power over nature increases. Increasing control of nature is accompanied by changes in man himself, especially by a growth and diversification of his wants, so that we may say that economic civilization consists largely in wanting many things and in learning how to make and use them. From this standpoint economic history may be divided into the following stages: (I) Direct Appropriation; (II) The Pastoral Stage; (III) The Agricultural Stage; (IV) The Handicraft Stage; (V) The Industrial Stage.

I. Direct Appropriation

Primitive man depends upon finding things, not upon making them. This does not mean that the lowest examples of mankind that we know do absolutely nothing in the way of transforming the materials of nature for use. The lowest types know the use of fire and have rude tools, but, nevertheless, the farther back we go, the more complete do we find the reliance on nature. One cannot read descriptions of the Negritos, Veddahs, Fuegians, or native Australians without being impressed with the similarity between the economy of these peoples and that of the lower animals. But there are many tribes commonly regarded as savages that show a great advancement over those that have been mentioned. Among the North American Indians, for example, we find a rude sort of cultivation of the soil along with hunting and fishing. Such soil cultivation has been termed "hoe-culture," and is to be distinguished from agriculture with the aid of domesticated animals found in a later stage of development.

This kind of agriculture is found in its highest state of development among the Negroes of Africa. "The ground for cultivation," says Ratzel, "is cleared by means of fire, or with the hatchet or small ax. On the east coast a broad chopper with a spear-shaped blade and short handle is also used. The lance or spearhead has, in general, to serve many peaceful purposes. Larger trees are killed by barking. Thorny branches are placed as a border to the fields, under the shelter of which close, quick hedges gradually grow up. The

ground is broken and cleared of weeds with a wooden spade sharpened to an edge at either end. Many peoples have hitherto not ventured to use iron tools, since they keep away the rain. When the ground has been got ready, somewhere about the beginning of the rainy season, the sower walks over the field, scraping a hole with his naked foot at every step, into which he lets some grains fall from his hand; the foot covers them up, and if the good witch doctor makes rain enough, and the bad one does not keep it back, there is nothing more to be done until harvest, unless to hoe the weeds once. . . . To the present day the plow is practically strange to them." [1]

The following characterization of the economy of primitive man applies with varying accuracy to the many tribes that may be placed in this first stage.

Characteristics of Primitive Man. — The range of wants is narrow: the savage is generally satisfied if he obtains mere subsistence of the rudest sort. In the satisfaction of these few wants he is, according to our modern standards, remarkably inefficient. From even the best natural resources he manages to get but a very poor living, depending as he does largely on the spontaneous products of nature. Magic and ritual are very generally relied upon as aids to wealth production. He is improvident, for he does not feel keenly the uncertainties of the future, and fails to make provision for them. Hence he has alternate periods of starvation and plenty. Only a small population is possible in this stage, as a tribe must have a large expanse of territory from which to draw its sustenance. The place of abode is easily changed, and warfare with neighboring tribes frequent. Private property in land is absent, although the beginning of the institution of ownership appears in the recognition of the individual's right to articles of personal use. There is little division of labor. What one man can do, all can do. The cultivation of the soil by the women and the specialized work of the medicine man are exceptions. As each tribe produces or finds for itself all that it uses there is little or no trade. The beginnings of slavery are found, but this institution plays no important part in the economy of primitive man, except among the most advanced tribes.

[1] Ratzel, *History of Mankind*, trans. by A. J. Butler, vol. ii, pp. 380–382.

II. The Pastoral Stage

In the older accounts of economic evolution, the impression is given that hunting peoples learned to domesticate animals and then led a pastoral life, later learning to subdue the vegetable kingdom, thus becoming agriculturalists. This is not altogether accurate. It is possible that the domestication of animals was developed in regions where considerable progress had been made in hoe-culture. As this knowledge spread, certain tribes became and remained pastoral nomads in regions where agriculture was impossible. But whatever the actual steps may have been, the pastoral peoples represent a type of culture that is lower than that of the agricultural stage (as distinguished from hoe-culture), and higher than that of the hunter. Within this stage also are classed together tribes of varying advancement. Illustrations of existing pastoral life are found in the tribes of central Asia, many of the Arabian and African tribes, and the Todas of India. Attempts have been made to trace the pastoral stage in the early history of the Hebrews, Germans, Greeks, and Britons.

Characteristics of Pastoral Peoples. — Some marked features of the first stage are found also among pastoral peoples. A fixed abode is not possible, as food must be found for the herds and flocks. Cities do not develop. Moreover, while the land will now support many more inhabitants per square mile than before, much land is still needed for pasture, and there is frequent collision and warfare between neighboring tribes. It follows also that there is very little private ownership of land among these peoples. Tribes as a whole lay claim to certain districts and try to keep other tribes from pasturing their flocks on them. In this stage there are frequently individual accumulations of wealth, consisting mostly of herds or flocks, and thus the contrast between rich and poor makes its appearance. Customary rules regarding the inheritance of wealth are recognized. But this early wealth does not produce commerce to any considerable extent, simply because there is little division of labor either between localities or within the tribe.

III. The Agricultural Stage

In this stage there is an enormous increase in man's power over nature. The production of wealth is increased especially by the use of animal power in cultivating the soil. One result is increased population. Land which under the more primitive methods of getting a living would give a scanty support to a small tribe for a part of the year will now maintain a whole community with a fixed abode. It is necessary for human development that men should live in definite places and have homes and a country. This results in new relations between men, new duties, new arts, and new possibilities. The beginning of the institution of private ownership in land falls within this stage, although it is difficult to trace the actual steps in the process.

A most important characteristic of this period is slavery. Slavery begins long before improved agriculture, but it now attains its full magnitude as an institution. Slavery occupies a prominent place in the history of Greece and Rome, and in the Middle Ages develops into serfdom.

Commercial intercourse is still comparatively slight in this stage. Fixed residence develops village communities, and these are economically self-sufficient. That is, they produce the things that they consume, and do not as a rule have surplus products to dispose of to others. Hence money does not at this time play an important part in the every-day life. The economic condition of Europe during the Middle Ages, before the growth of cities, illustrates the agricultural stage.

The Manorial Economy in England. — England was almost wholly agricultural for three centuries following the Norman Conquest. In the thirteenth century the population for the most part lived in villages or manors, each controlled by a lord to whom the rest of the inhabitants were bound by customary rules to render certain assistance, as in the cultivation of his land. The villagers were of various classes, according to the amount of land which they held and according to the services which they were required to perform. The land of

each tenant was not a compact area, but was composed of strips scattered in the three great fields into which the arable land was divided for purposes of crop rotation.

Some handicraftsmen were also found upon the estate, but they do not occupy an important place in the economy of the village. For the most part, they were probably slaves or household servants. Slaves in England constituted at the time of the Conquest about nine per cent of the population, but "in some of the eastern and midland shires do not appear at all, or fall to a percentage of four or five," while they rise to as much as twenty-four per cent in other parts of the country. "We cannot but explain this by the supposition that in the later stages of the English conquest a greater number of the British cultivators were spared, so that in these districts slaves came to form a considerable part of the rural population. Absolute slavery, however, disappeared in less than a century after the Conquest, and the *servi* became customary holders of small plots, like the cotters elsewhere, but on more onerous conditions." [1]

These manors were largely self-sufficient in their economic life. There was, to be sure, some trade. England exported raw products to the continent and received back some of the finer forms of manufacture. But the ordinary needs of the very frugal life which the tenants had to live were supplied by products of the manor itself. During the centuries following the Norman Conquest important changes took place in the manorial system: (1) a rapid growth in the number of free tenants; (2) the commutation of customary services into fixed payments in money or kind; and (3) the appearance of a class of agricultural laborers dependent on the wages which they received.

In contrasting the manorial economy with the village of the present day, Professor W. J. Ashley has pointed out the following differences: (1) Now English farmers generally live in separate homesteads among the fields they rent, but then all the cultivators lived side by side in the village street. (2) Now each farmer follows his own judgment as to his agricultural operations, but in this early period he took his share in the common method of cultivation, which was regulated by custom, enforced by the manor courts. (3) Today, if the landlord himself engages in farming, his management is independent

[1] See Ashley, *English Economic History*, vol. i, pp. 17–18.

of that of his tenants, but under the manorial system he depended almost exclusively upon the labor of his tenants, who contributed plows, oxen, and men. (4) Aside from the great gulf between lord and tenants, there was then no such social separation between the cultivators as there is today between large and small farmers. The manorial economy of England was a type, though somewhat more systematically developed, of conditions on the continent of Europe.

IV. The Handicraft Stage

This stage begins with the development of towns as centers of trade and handicraft in the latter part of the Middle Ages and extends to the introduction of power manufacture in the latter part of the eighteenth century. During such a long period many changes took place in the economic life of the people of Europe, but so far as the growth of man's power over nature is concerned the whole period is in marked contrast with the modern era of machine production.

The Gild System. — The growth of trade brought with it the merchant gild, the purpose of which was to regulate the conduct of trade and to keep a monopoly of it for the merchants of the town. Merchant gilds appeared in all the larger towns of England in the twelfth century. But a new class was developing in the towns, — the craftsmen who were engaged in the making of things for sale. As this handicraft grew in importance, the merchant gild was superseded by the craft gild, which in England attained its fullest development in the first half of the fourteenth century. Each craft had its gild, which specified in detail how the business should be carried on, how many should be admitted to it, and how the trade should be learned. This growth in specialization meant also a growth in trade, but in this early part of the handicraft period, commerce was much restricted as compared with that of the present day. The towns made exchanges mostly with the country surrounding them, there being as yet no national or world market of any importance. Plainly such a general system of exchange could not be carried on by barter, and in this period money became increasingly important.

The agricultural stage had in the greater part of Europe culminated in the feudal system. The nobility maintained order and attended to the fighting while the serfs tilled the soil. The manufacturing cities became the rivals of the feudal lords, who felt their power threatened, and hence they bitterly opposed the cities. The cities were free, and the serfs who fled to them were accepted and made freemen.

The Domestic System. — With the beginning of the modern period the town system gave way to a larger economy. The towns lost the control of trade. The gild system was gradually succeeded by the domestic system, which developed in the sixteenth and seventeenth centuries and was a characteristic feature of English industry until the middle of the eighteenth century. As in the gild system, industry was carried on by hand in a small way, but the functions of merchant and workman were now separated. The gild master sold the goods which he produced in his shop directly to the customers who were to use the goods, but under the domestic system the workman came to be less independent. He received the raw material from a middleman, to whom he also delivered the finished product. Much of this work was done outside of the towns, the artisans thus being enabled to devote part of their time to agriculture. Defoe, in his tour through Great Britain (1724–1726), describes the methods employed as follows:

> The land "was divided into small inclosures from two acres to six or seven each, seldom more; every three or four pieces of land had an house belonging to them, . . . hardly an house standing out of a speaking distance from another. . . . We could see at every house a tenter, and on almost every tenter a piece of cloth or kersie or shaloon. . . . At every considerable house was a manufactury. . . . Every clothier keeps one horse, at least, to carry his manufactures to the market, and every one generally keeps a cow or two or more for his family. By this means the small pieces of inclosed land about each house are occupied, for they scarce sow corn enough to feed their poultry. . . . The houses are full of lusty fellows, some at the dye-vat, some at the looms, others dressing the cloths; the women or children carding or spinning, being all employed, from the youngest to the oldest."

Agricultural Changes. — Many important changes in the agriculture of England took place during the handicraft stage.

The most prominent of these is the process called inclosure. Under the manorial system the lands in the common fields were the property of a landlord, but his rights were not exclusive and were qualified by rights of the tenants. There existed a certain kind of partnership of landlord and tenant in the cultivation of the land. Inclosure is the term used to designate the dissolution of the partnership, or the separation of rights. After inclosure the tenant had generally a farm which was in one piece of land, instead of being in scattered strips in different fields, and for this he paid usually a definite money rent. The farmer could make improvements on his own account, which was impossible when he held scattered strips in great fields. Inclosures were made during this whole period and especially during the Tudor period. Farms became larger and when labor was scarce and wages high, sheep farming, requiring few laborers, was rapidly extended. Inclosures resulted in great agricultural improvement, but at the same time they were frequently attended with hardship for the poorer people. Sometimes the common rights, especially those of common pasturage, were not fully paid for, although the rule was that of compensation. But the result was to separate many people from the land; frequently the payment received by the poorer people was wasted. The right to pasture a cow meant a definite connection with the soil; the money received in payment for this right might quickly disappear. Even now in English villages it is possible to find those who receive small sums for ancient rights, and these are too often used in dissipation. In Epworth, England, the villagers formerly had a right to cut turf in a field which is now let for a money rent, and this is used to buy coal which is distributed among the people in payment of their ancient rights.

Convertible husbandry, rotation of crops, the cultivation of root crops, improved breeds of animals and other forms of agricultural progress accompanied inclosure, which is still going forward, although the process is nearly completed so far as the arable land is concerned. A halt has now been called to the inclosure of forests and common fields, especially when used

for pasturage, and these are now found scattered over England and used as public parks and playgrounds; but often with certain private rights of pasturage which have descended to their owners by inheritance or which have been acquired otherwise, as by the purchase of a cottage to which the rights are attached. An illustration of a village with extensive common fields is afforded today by Stelling Minnis, near Canterbury, England.

The Mercantile System. — The decay of town authority did not mean that industry and commerce were left to the free play of competition. The supervision of the central government took the place of that of the towns. The national system of regulation has been called the Mercantile System, which prevailed in England (and in other countries) from the sixteenth century to the nineteenth. Its essential idea is the guidance of economic affairs in such a way as to increase the commercial and military power of the nation as a whole. The navigation laws which the student has met with in his study of American history were a part of this system. An attempt was made to create a " favorable " balance of trade and to maintain a good supply of the precious metals. Agriculture was fostered with the aim of promoting the growth of population. The mercantile system has often been described as consisting chiefly of trade restrictions, but it is the contention of Professor Schmoller that in its essence the system meant " the replacing of a local and territorial economic policy by that of the national state."

It was characteristic of the mercantile system, too, to interfere in the conduct of internal trade. Prices, wages, and the rules of apprenticeship were fixed by public authority. The quality of goods was inspected by public officials. Patents of monopoly on the sale of certain commodities, such as gunpowder, matches, and playing cards, were extensively granted by royal authority to favored individuals or companies, ostensibly to foster new industries.

"At the Council of York, Charles was obliged to declare many of the industrial patents void; but enough remained to call forth an indignant declamation from Sir. J. Colepepper in the Long Parliament: 'I have but

one Grievance more to offer unto you; but this one compriseth many; it is a nest of wasps, or swarm of vermin, which have overcrept the land, I mean the monopoler and polers of the people. These like the frogs of Egypt, have got possession of our dwellings, and we have scarce a room free from them; they sip in our cup, they dip in our dish, they sit by our fire; we find them in the dye-vat, wash-bowl, and powdery tub; they share with the butler in his box, they have marked us and sealed us from head to foot. Mr. Speaker, they will not bate us a pin; we may not buy our own cloaths without their brokage. These are the leeches that have sucked the commonwealth so hard that it is almost become hectical. And some of these are ashamed of their right names; they have a vizard to hide the brand made by that good law in the last Parliament of King James; they shelter themselves under the name of a corporation; they make bye-laws which serve their turns to squeeze us and to fill their purses; unface these and they will prove as bad curs as any in the pack. These are not petty chapmen, but wholesale men.'" [1]

A full account of this stage in English history would deal with (1) the regulation of labor, including the Statute of Artificers passed in the reign of Elizabeth, which provided that all able-bodied men might be compelled to serve as agricultural laborers, and that all artificers, rural or urban, should undergo an apprenticeship of at least seven years. In this same reign provision was made for the assessment of wages by the Justices of the Peace. Every year in each locality the justices were to assemble, and, "calling to them such discreet and grave persons . . . as they shall think meet, and conferring together respecting the plenty or scarcity of the time," they were to fix the wages for every kind of manual labor, skilled or unskilled, by the year, week, or day, and with or without allowance of food. A full account would deal also with: (2) the development of systematic poor relief by civil authority; (3) the encouragement of shipping and of (4) the immigration of foreign artisans to introduce new industries; (5) the regulation of the corn trade; (6) the establishing of plantations in the colonies; (7) the regulation of the coinage; (8) the development of banking, insurance, and foreign commerce, and the decay of the old notions regarding the sinfulness of interest taking.

[1] Cunningham, *English Commerce and Industry, Modern Times*, Part i, pp. 307–308.

V. The Industrial Stage

In the latter part of the eighteenth century, the slow-going methods of the handicraft stage were radically changed by the Industrial Revolution. The fundamental feature of this change is the introduction of power manufacture. The industrial revolution and the chief features of the industrial stage will be discussed in the following chapter.

Before proceeding to the consideration of the last stage, it will be well to notice some of the other views which have been expressed concerning the periods of economic development. The German economist, Hildebrand, has taken as his principle of classification the method of exchanging goods, and from this standpoint he gets the following three stages: (1) barter, (2) money, and (3) credit. All three methods of exchanging, to be sure, are in use at the present time, but the extensive use of credit is the new and characteristic thing about present-day exchange. It has been objected that the period before the use of money became prominent is characterized not so much by the barter of goods as by the fact that exchange itself is unimportant.

Another writer (Bücher) has divided economic history according to the nature and size of the normal self-sufficing economic unit, as follows: (1) the independent domestic economy, (2) the town economy, (3) the national economy.

In the first stage the interval between production and consumption is small. Things are produced where they are consumed, as in the village communities of the early middle ages. In the town economy the interval is somewhat greater. The artisans in the town produce for the consumption of other persons, for the most part in the immediate neighborhood, so that the producer meets the consumer without intermediaries. In the third stage, production is for a national market, so that goods may pass through many hands before reaching the consumer, and the system of coöperative division of labor embraces the whole nation. Possibly, according to this view, a fourth stage might be added, — that of a nascent world economy.

Again, we might pay attention chiefly to the condition of labor. Beginning with a condition where there is no distinct laboring class, we pass through slavery and serfdom to free labor, regulated at first by law and custom, then by individual contract, and finally in large measure by group contract or collective bargaining supplemented to an increasing extent by legal regulations of a new kind.

THE ECONOMIC STAGES

From the Standpoint of Production	From Bücher's Standpoint	From Hildebrand's Standpoint	From the Labor Standpoint	Illustrations from English History
1. Direct Appropriation	Independent Domestic Economy	Barter Economy	Laboring class not differentiated	Prehistoric
2. Pastoral				Before Christ
3. Agricultural			Slavery and Serfdom	11th–14th Centuries
4. Handicraft	Town Economy	Money Economy	Free Labor governed by Custom	13th–18th Centuries
5. Industrial	National Economy	Credit Economy	Individual Contract Group Contract	18th Century to the Present Time

These various classifications are not contradictory; on the contrary, they supplement each other. Still other divisions are possible. In the preceding table these various points of view are roughly correlated and applied to the history of England. These divisions of time are in no sense accurate, and are intended merely to be suggestive.

QUESTIONS AND EXERCISES

1. Write a description of the economic life of a tribe in one of the first two stages.
2. What is the difference between slavery and serfdom?
3. Give an account of the East India Company.
4. Sketch the development of the woolen industry in England to 1760.
5. Give an account of the origin of the Bank of England.
6. Summarize the history of poor relief in England.
7. It has been held that because economic progress has been continuous, it is incorrect to divide it into "stages." Discuss this view.

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CHAPTER IV

THE EVOLUTION OF ECONOMIC SOCIETY (*Continued*)

The Industrial Revolution. — The passage from the handicraft to the industrial stage in England is generally known as the Industrial Revolution. It has been objected that this term is misleading because the introduction of the modern factory system required many years and was but the working out of conditions that had been long maturing. It is true that the growth in the division of labor, the expansion of commerce, and the technical progress of former ages were necessary preliminaries to the industrial revolution, but there is little danger of overemphasizing the importance or the rapidity of the change. The period from 1770 to 1840, the span of a single life, is, after all, a short period from the standpoint of the historian. Yet the changes of this period swept away the inefficient methods that had been used for centuries, and caused profound modifications in social structure. To understand the nature of this movement, we must review the condition of things before it began.

England in 1760. — England was at this time largely self-sufficing in its economic life, producing for itself its food and other articles of ordinary consumption, although compared with medieval days there had been a marked expansion of international and colonial trade. Woolen goods were the most important export. The imports consisted largely of wines, spirits, rice, sugar, coffee, oil, and furs, and some wool, hemp, silk, and linen yarn. Within the nation, too, there was not such a degree of specialization of industry in particular localities as is found at the present day, although the beginning of such localization had clearly been made in the textile and iron industries. On the whole, however, the commerce between the different sections

of the country was slight. The means of transportation were exceedingly poor, notwithstanding the growth of turnpike roads. The roads were described by a traveler as " most execrably vile." Such was their condition that pack horses were still a common means of getting goods to market. Rivers were important highways, canal building having barely begun.

The system of hand manufacture was still in general operation. Although the workmen under the domestic system were no longer owners of the material upon which they worked, yet the tools they used were their property. The beginnings of certain features of the factory system, however, are to be seen long before the use of power machinery, for in some cases workmen were employed in large numbers in buildings owned by the employer, who also furnished the mechanical equipment. But to a large extent manufacturing was combined with agriculture, not only in the textile trades, but in other branches also. " At West Bromwich, a chief center of the metal trade, agriculture was still carried on as a subsidiary pursuit by the metal workers."

The medieval system of common field tillage was extensively used, a large part of the land being still uninclosed. The cultivation was exceedingly poor, but important experiments tending toward a " new agriculture " were being made in the second quarter of the eighteenth century by Jethro Tull and " Turnip " Townshend. Of the whole number of farms, approximately one half " were owned and occupied by the various classes of freeholders and copyholders; that is, by land-owning farmers."

The medieval notion of the relation of government to industry was still nominally in force. Detailed and special legislation was supposed to be the means of securing a well-ordered trade, as explained in the preceding chapter. But a tremendous revolt had begun against this whole system. This revolt had its religious and political as well as its economic aspect. The same year that Thomas Jefferson wrote the Declaration of Independence, asserting that all men are by nature equal, Adam Smith published the *Wealth of Nations*, the most influential book ever written on economics.

"Every individual," said Smith, "is continually exerting himself to find out the most advantageous employment for whatever capital he can command. It is his own advantage, indeed, and not that of the society, which he has in view. But the study of his own advantage, naturally, or rather necessarily, leads him to prefer that employment which is most advantageous to society. . . . What is the species of domestic industry which his capital can employ, and of which the produce is likely to be of the greatest value, every individual, it is evident, can, in his local situation, judge much better than any statesman or lawgiver can for him." [1]

The Mechanical Inventions. — During the last half of the eighteenth century the progress of invention was exceptionally rapid. Kay's flying shuttle (1738) had facilitated the weaving process to such an extent that it became difficult to secure enough yarn from the spinners. Hand spinning was improved by Hargreave's "jenny" about 1767; Arkwright, in 1771, made a practical success of roller spinning (a method patented long before), using horse power, and later, water power. Crompton combined these two processes in 1779. After 1785 steam power was applied to cotton spinning, and then it was the weaving process that was felt to be too slow. Cartwright began his experiments in 1784, but the power loom did not come into general use until early in the nineteenth century.

The improvement in the steam engine also made possible great advances in the iron industry, of fundamental importance in an age of machinery. The production of English iron was over seventy-five times as great in 1840 as it had been in 1740.

The need for better transportation was met by improved roads, by the building of canals (especially 1790 to 1805), and by the development of steam locomotion. The germ of the modern railway is seen in the tramways used in the coal mines. Cast iron rails were used as early as 1738. The first tramway to be used for public purposes was chartered in 1801, the cars to be drawn by horse power. Trevithick made a locomotive in 1803 that was of practical use. In 1814 Stephenson constructed a locomotive that could draw a load of thirty tons at the rate of three miles an hour. The Stockton and Darlington road was opened in 1825 with a Stephenson locomotive that

[1] A. Smith, *Wealth of Nations*, Book iv, Chap. ii.

made fifteen miles an hour, but two years later the directors of the road considered the advisability of abandoning the use of locomotives. In 1829 the directors of the Liverpool and Manchester Railroad arranged a prize contest to determine the practicability of steam locomotion. The success of Stephenson's "Rocket" in meeting the requirements of the contest demonstrated that the new method of locomotion had come to stay.

"A general survey of the growth of new industrial methods in the textile and iron industries marks out three periods of abnormal activity in the evolution of modern industry. The first is 1780–1795, when the fruits of early inventions were ripened by the effective application of steam to the machine industries. The second is 1830 to 1845, when industry, reviving after the European strife, utilized more widely the new inventions, and expanded under the stimulus of steam locomotion. The third is 1856–1866 (*circa*), when the construction of machinery by machinery became the settled rule of industry." [1]

Agricultural Changes. — During the Industrial Revolution there were also important changes in agriculture. Bakewell, in the second half of the eighteenth century, improved the breeds of sheep and cattle. The inclosing of the common fields proceeded with great rapidity, not, as in the sixteenth century, for the purpose of sheep raising, but to permit of more efficient tillage of the soil. Between 1760 and 1850 over seven million acres were inclosed in England. The small land-owning farmer was crowded out, partly because more investment per acre was needed with the new agriculture, partly because "gentlemen farmers" (men who had made money in other pursuits and took up agriculture because it was fashionable) bought them out, and because the price of land was greatly increased by the desire of wealthy men to build up family estates. Today practically all English farmers are tenants. The small farmer, who under the domestic system was also frequently a handicraftsman, was thus crushed between the new agriculture and the new industry.

"Hitherto the rude implements required for the cultivation of the soil, or the household utensils needed for the comfort of daily life, had been made at home. The farmer, his sons, and his servants in the long winter evenings

[1] Hobson, *Evolution of Modern Capitalism*, edition of 1907, p. 89.

carved the wooden spoons, the platters, and the beechen bowls, plaited wicker baskets, fitted handles to the tools, cut willow teeth for rakes and harrows and hardened them in the fire, fashioned ox yokes and forks, twisted willows into the traces of other harness gear. Traveling carpenters visited farmhouses at rare intervals to perform those parts of work which needed their professional skill. The women plaited the straw for the neck collars, stitched and stuffed sheepskin bags for the cart saddle, wove the straw and hempen stirrups and halters, peeled the rushes for and made the candles. The spinning wheel, the distaff, and the needle were never idle; coarse hand-made cloth and linen supplied all wants; every farmhouse had its brass brewery kettle. . . . All the domestic industries by which cultivators of the soil increased their incomes, or escaped the necessity of selling their produce, were now supplanted by manufactures." [1]

Effects of the Industrial Revolution. — As has already been indicated, the Industrial Revolution introduces one of the great stages in the development of man's power over nature. But along with the new opportunities came also new dangers and perplexing problems.

1. *The Factory System.* — The use of expensive machinery and steam power made it impossible for men to carry on their work in their own homes. The factory supplanted the home as the typical center of production. Instead of working by themselves or with a few assistants, men now to a much greater extent than before had to congregate in cities, and submit to a new discipline in large groups organized for purposes of production. This brought with it a new division of society into classes. The machine and the workshop, as well as the raw material and the product, are at no stage in the productive process owned by the men who do the manual work. The masses become wage earners. Now, in some industries not one in a hundred can by exceptional ability become an independent employer, and the workman knows that he is a workman for life. So we have now two industrial classes, laborers and capitalists, with a great gulf between them which comparatively few men can cross, and with interests which often seem irreconcilable. What the ultimate effects of the new system of

[1] Prothero, quoted by Cunningham, *Growth of English Industry and Commerce, Modern Times,* Part ii, p. 722.

production will be cannot be stated, but it has been suggested that these changes in external relations are affecting also men's habits of thought. Can we expect the institution of private property to seem as natural and sacred to those who have nothing to do with the buying and selling of products as to those who engage much in pecuniary transactions? It has been suggested that the feeling that we have a right to the product of our own labor is merely a survival of the era of small-scale hand manufacture.

2. *The Expansion of Markets and Industrial Specialization.* — Along with the new methods of production there has been a change from restricted local markets to national and even world markets. Improved methods of transportation make it possible for different branches of production to be localized in regions where there are special facilities for raw material or power. This implies greater economic interdependence and greater liability to trade fluctuations and disturbances. One great advantage of the old slow-going system of manufacture and trade was its regularity. As the area of the market increases, manufacturers find it more difficult to decide what and how much to produce. Trade fluctuations have increased in severity with the growth of large-scale production. This is due not merely to the changing and enlarging demand which cannot be calculated, but also to the fact that manufacture itself is constantly being disturbed by improvements which cannot be foreseen. It is possible that a still larger scale of manufacture hereafter will bring steadiness in industry, but whatever the cause of these fluctuations, the effect upon the wage earner is demoralizing. If he were wise enough to save his earnings during good times, and so have something for hard times, he would not suffer so much. But very few people who live in abundance can do this; how much less those whose condition even in good times is one of meager comfort!

Evils of the Transitional Period. — The condition of the English working classes in the latter part of the eighteenth and early nineteenth centuries was undoubtedly worse than in any other period in the history of the country. It is difficult to

say to what extent this was due to the introduction of the factory system. In addition to the new methods of manufacture there were wars, peculiar conditions in land ownership, duties, and taxes. There is some evidence that the condition of child workers under the domestic system was often worse than in the factories, their parents proving the hardest taskmasters.

"The evils and horrors of the industrial revolution are often vaguely ascribed to the 'transition stage' brought about by the development of machinery and the consequent 'upheaval.' But the more we look into the matter, the more convinced we become that the factory system and machinery merely took what they found, and that the lines on which the industrial revolution actually worked itself out cannot be explained by the progress of material civilization alone; rather, the disregard of child-life, the greed of child-labour, and the maladministration of the poor law had, during the eighteenth century, and probably much farther back still, been preparing the human material that was to be so mercilessly exploited." [1]

But whatever the causes, the facts that have been revealed regarding the conditions in English mines and factories of this period are amazing. The picture includes cruelty to apprentice children, excessive hours, and unhealthful conditions of work. The evils were worst in the smaller factories, the owners of which were hard pressed by relentless competition. Outside of the factories, also, those who attempted to continue to work in their homes in the old way suffered from irregular employment and low earnings. The distress of the hand-loom weavers affords an illustration.

Competition and Laissez-faire. — We have seen that Adam Smith advocated liberty. He asserted that every man, if allowed to do as he pleased, would sooner or later do that for which he was best fitted, and would consequently work where he could get the most wages. Every man would buy what suited him best, and, after some experiments, manufacturers would make what was called for. If one line of work was more profitable than another, more men would go into it and by their competition would bring prices down. If men cheated their customers, the customers would go elsewhere, and cheating

[1] Hutchins and Harrison, *A History of Factory Legislation*, p. 13.

would not pay. Everywhere men would look out for their own interests and would make the bargain that was most advantageous to themselves. This system of balanced self-interests resulting from competition was the best regulator possible, infinitely better, he claimed, than the old-time laws, which only incumbered the development of industry. If the policy of industrial freedom were adopted, there would be, he prophesied, a great increase in the production of wealth.

This view gained favor during the Industrial Revolution. Not that a wholesale repeal of the old laws occurred — such things never happen in England, and are difficult anywhere — but there is a quiet and effective way of changing laws by changing men's ideas regarding them and leaving them unenforced. A law that has been long observed has often to be long dead before people gain the courage to repeal it. So the law requiring seven years' apprenticeship before one could enter certain trades quietly died during the eighteenth century, and when, finally, in the labor troubles early in the nineteenth century some workmen discovered the old law and prosecuted employers for violating it, it was first suspended and then repealed, as being plainly ill adapted to the new condition of industry. So, little by little, the old laws were repealed or forgotten, and men were left free to bargain and manufacture as they pleased.

This policy of *laissez-faire*, or letting things drift, was very generally accepted by the economic writers who followed Adam Smith, and was clearly reflected in the parliamentary debates. The universal free play of competition came to be the prevailing ideal in this first phase of the industrial stage. It was in keeping with this spirit that England became a free-trade nation in this period, the last step being taken when the " corn laws " were repealed in 1846, the act going into effect in 1849.

The Reaction against the Passive Policy. — It may be said that by 1850 the abandonment of mercantilistic ideas was complete in England, but long before this date a new system of legislation for the purpose of controlling industry had been begun. The government could not ignore the actual conditions that resulted from competition and the introduction of

machinery. We have now to consider some of the main lines of development of this modern industrial regulation.

1. *The Quality of Goods.* — In repealing the laws for the inspection of wares it was urged that cheating would not pay and would cure itself. Indeed, it was said that the very inspection of wares by the government was the cause of fraud; for, the government brand being often put on carelessly, men bought poor goods, because of the brand, which they would have rejected if they had examined them. The abolition of the laws would result in each examining goods for himself, it was asserted. It is hardly necessary to say that these hopes were not realized. Men might be trusted to attend to their own interests if they knew enough to do so, but they do not. Who can tell the quality of baking powder, or ground spices, or patent medicines, or many other things that are misrepresented when offered for sale? For these the ordinary buyer's knowledge is worthless; an expert must be employed. Such has been the experience of the English people and also, more recently, of the people of the United States, and the law now provides for the inspection by government experts of many articles of food. The notion that men will always ruin their business prospects if they cheat, and so will be deterred from cheating, has been utterly exploded by this English experiment. The reputation for honesty is undoubtedly a source of strength to many business houses; but many a man has perpetrated an audacious fraud upon a country for a few years and retired with a fortune when his cheating began to be known. The inspection of goods by the State is a principle now fully recognized, the only question being how far it should be applied.

2. *The Protection of Labor.* — As a result of a series of epidemics of infectious fevers, public attention was called to the condition of the apprenticed children in cotton factories. In 1796 the Manchester Board of Health reported upon the unhealthful conditions under which the children worked, pointing out that " the untimely labour of the night, and the protracted labour of the day, with respect to children, not only tends to diminish future expectations as to the general sum of life and

industry by impairing the strength and destroying the vital stamina of the rising generation, but it too often gives encouragement to idleness, extravagance, and profligacy in the parents, who, contrary to the order of nature, subsist by the oppression of their offspring." In 1802 the first factory act was passed to protect the health and morals of pauper children in cotton factories. The apprentices were not to work more than twelve hours by day, and after 1804 not at all by night, but the law was not effectively administered. After much agitation, in which Robert Owen took a prominent part, a second step was taken in 1819. The act prohibited children under nine years from working in cotton mills, and no person under sixteen was to be employed more than twelve hours per day. As with the act of 1802, the enforcement of the law was left to the justices of the peace. In 1833 regulations as to conditions of work for children and young persons were made for all textile factories, and special inspectors were provided to enforce the law. In the following years the controversy concerning labor legislation was violent and bitter. After a report by a committee revealing shameful conditions in the mines, an act was passed in 1842 prohibiting the employment of women and children underground. In 1844 women were included in the protective factory legislation and the half-time system for children was enacted. The Ten Hours' Act of 1847 limited the working day to ten hours. Subsequently protective legislation was made to cover industrial establishments generally. These various laws were consolidated in 1878, and again in 1901.

Another important line of legislation that has been made necessary by the extensive use of machinery deals with the *liability of employers* in cases of accidents to their workmen. Under the common law a workman was entitled to receive damages when injured as a result of the negligence of his employers, but he was supposed to assume the ordinary risks of the business. When the injury was caused by the workman's own negligence or by the negligence of a fellow-workman the employer was not responsible. The Employers' Liability Act of 1880 gave the workman the right to compensation in certain cases

where the injury was caused by the negligence of other employees, and in 1897, by the Workmen's Compensation Act, a radical departure was made from previous legislation. The employer is now liable to pay damages even when there has been no negligence on his own part, and even when the accident has been due to the neglect of the injured workman himself, except only in cases of "serious and willful misconduct." This principle now applies also to agriculture, shipping, and mercantile and domestic employments, and certain trade diseases have been made to count as accidents. The transition from "employers' liability" to "workmen's compensation" was thus a change in more than mere name. The law of employers' liability aimed merely at doing justice as between the workman and his employer. Workmen's compensation statutes are based upon a broader social principle, involving the recognition of the facts that industrial accidents are part of the price that has to be paid for the use of modern methods of production; that the worker and his family are ill-equipped to bear the burden of the loss of earning-power that results from such accidents; and that the duty of making adequate compensation falls upon society at large, which may very properly use the employer as its responsible agent for this purpose.

A newer and larger development of the principle of compensation is found in *social insurance*, which recognizes and extends the principle of social responsibility, but combines with it an insistence upon the equal importance of the development of habits of individual thrift and self-help. The National Insurance Act of 1911 provided for compulsory insurance against sickness, and (in certain industries) against unemployment.

3. *Labor Organizations.* — Modifications in the working of free competition have also been effected by the voluntary organizations of the workers, not only by their influence upon legislation, but also by direct dealings with employers. We have noticed the gilds, which played a large part in the history of the Middle Ages. These, however, were not like modern trades unions. They were unions of men who worked, but not exclusively of wage earners, nor even chiefly in the interests of wage earners.

They were formed of masters. But combinations of the wage-earning classes are found long before the Industrial Revolution. They do not become prominent, however, until the nineteenth century. Laws prohibiting the combination of laborers had been passed at intervals since the Middle Ages, and in 1800 Parliament, finding that unions were increasing, passed a most comprehensive law to suppress them, declaring illegal "all agreements between journeymen and workmen for obtaining advances of wages, reductions of hours of labor, or any other changes in the conditions of work." Under this law many workmen were prosecuted and severely punished, but in vain. In 1824 Parliament confessed the law a mistake, and repealed it along with previous laws relating to combinations of workmen. Trades unions, thus tolerated, grew at an astonishing rate, but they were still subject to legal persecution. Judicial decisions, especially, were adverse to them, as the courts regarded them as agreements in restraint of trade. But in 1871 a law was passed which declared that the purposes and actions of trades unions were not to be deemed unlawful as being in the restraint of trade, and in 1875 the legality of trades unions was still further recognized by the provision that acts which were not punishable as crimes when done by one person should not be indictable as conspiracy when done by two or more in furtherance of trade disputes, and finally, in 1906, the courts were forbidden to entertain actions for damages against trades unions. In this same year peaceful picketing was legalized.

4. *The Extension of Government Enterprise.* — The reaction against a *laissez-faire* policy is further shown by a growth in the sphere of industry directly managed by the government. We find municipalities operating street railways and furnishing water, gas, and electric light. Municipal enterprise includes also in various places markets, docks, dwellings, baths, race courses, oyster fisheries, slaughterhouses, milk depots, employment bureaus, sewage farms, theaters, and many other lines of activity. The national government conducts the postal savings banks, the parcels post, and the telegraph and telephone systems.

Summary. — In this chapter a brief sketch has been given of England's attempt to deal with a new set of forces. An immense increase in production has taken place, due in part to competition, more to machinery. But the distribution of this wealth, growing directly out of the principles of competition so long as they were unrestrictedly applied, was such that poverty grew rapidly, and some said even faster than wealth, and the laboring population of the realm sank into deeper distress and degradation. The partial benevolence of employers, which would fain have mitigated this disaster, was, as a rule, neither welcome nor tolerated by the competition which had made itself law. Not until this benevolence was formulated, generalized, and enforced by disinterested legislation was the horror of the situation diminished. When we hear the principle of " a fair field and no favor " and " no State intervention " advocated by a man strong in the consciousness of personal advantages, we must remember that he is a century behind his time, and that he has not read or has not profited by one of the most dolorous chapters in human history. The English nation, after a trial of free competition and no interference, as thorough as could well be made, has undeniably returned to the principle of governmental activity which she had abandoned, — a principle which recognizes as the function of the State the protection of the citizens, and the furtherance of their material and social well-being, by every law and every activity which offers a reasonable guarantee of contributing to that end. It is to be noticed furthermore that, as a matter of fact all this activity of the State contributing to material and social well-being has also increased freedom as a positive, constructive force. It has promoted the growth of individual powers and enlarged the scope of activity of the average citizen. It has not tended to slavery, as Herbert Spencer long ago maintained, but its tendency has been in the direction of the sort of liberty that is really worth while; namely, liberty as a power of development and of contributing (in the words of the philosopher T. H. Green) to the " common good." The older legislation *restricted* the individual; the newer legislation enlarges and equalizes opportunities.

QUESTIONS AND EXERCISES

1. What is the origin of the term "*laissez-faire*"?
2. What laws are in force in your state regarding the inspection of food and other articles offered for sale?
3. Give a detailed account of the development of one of the great inventions.
4. Give a sketch of the enactment and repeal of the "corn laws."
5. Give an account of the development of monopolies and trusts in England.

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CHAPTER V

THE ECONOMIC DEVELOPMENT OF THE UNITED STATES

Economic Stages in American Industrial History. — The transit of civilization from Europe to America, as an American historian [1] has finely phrased it, thrust the European laws, customs, and industrial technique of the seventeenth century into the primitive environment of a wilderness, and for the moment the wilderness dominated. Industry was forced to begin at the beginning and retrace — as the child is said to retrace the mental development of mankind — the industrial evolution of the race.

The American people have thus, during the comparatively brief historical period which has elapsed since the settlement of this country, run the whole gamut of industrial evolution, passing with striking rapidity through all the stages differentiated in the preceding chapters. There was slaughter of captives in the Indian wars, enslavement of Indians, particularly — but not only — in the Spanish colonies, later the introduction of negro slavery and modified serfdom in the indentured servants, then the individual wage contract, still supreme among agricultural laborers, and finally, collective bargaining through the great trades unions of the present. In a similar way, practically all the stages differentiated in the table given on page 45 may be traced in the industrial evolution of the United States.

Naturally it is not to be supposed that American industrial society worked its own way unaided through all those economic stages which the race, with " painful steps and slow," has laboriously traversed in its upward march. Stimulated by European

[1] Edward Eggleston, *Transit of Civilization.*

culture, we hurried through the earlier stages, for the most part, retracing them merely as an incident of frontier conditions, and skipping some — such as the pastoral stage — in many sections of the country. On the other hand, it must not be inferred that we have everywhere passed beyond the so-called primitive stages. Barter may still be found in some parts of the country, and there are comparatively few rural districts in which credit transactions have in the main taken the place of money transactions. It is interesting to observe that, owing to the progressive western movement of the population of the country, the stages in the history of man's productive efforts appeared in regular order from west to east. Thus, a few years ago, the country of the frontier was occupied by hunters and trappers; next were great stretches of country almost entirely devoted to grazing; farther east, agriculture predominated; trade and commerce were active, especially in the country east of the Mississippi; manufacture on a large scale was prominent in the North Atlantic and North Central groups of states; while finally the large industrial combinations which mark the latest step in development were confined (with respect to legal residence at least) to the Atlantic seaboard. "The United States lies like a huge page in the history of society."[1]

Sectionalism. — This phenomenon of the contemporaneous existence of several industrial stages, side by side, under the same government, has laid upon this country some of the hardest problems which it has had to solve. The ever present but ever receding frontier has continually created a set of interests antagonistic to those of the settled industrial and commercial communities. Shays's Rebellion in 1786 was in part a protest of the more thinly settled debtor communities against the determination of the commercial centers to introduce the sound currency which a developed commerce requires. The federal Constitution was adopted and the present government created in order, largely, to strengthen national credit, insure taxation, remove trade barriers, and provide a sound currency; and the opposition to the ratification of the Constitution came largely

[1] F. J. Turner, *The Significance of the Frontier in American History.*

from those agricultural and thinly settled communities that wanted to keep paper money, evade debt payment, and resist the collection of taxes. During the earlier history of the country wildcat banking and inflated currency regularly followed in the wake of the frontier.

Tariff legislation, with its different appeal to the agricultural and industrial sections of the country, has been another prolific source of territorial conflict. After the War of 1812, the manufacturing centers of the North redoubled their efforts for protection. This was strenuously resisted by the South, where manufactures had practically gained no hold, and the struggle of the sections over the tariff led to Nullification in South Carolina and the acceptance by the South of the doctrine of secession. The Civil War itself was largely a sectional quarrel growing out of ceaseless friction between a section which had reached the industrial stage and a condition of free-wage contract with a section which had been held in the agricultural stage by the retention of slavery. As a more recent illustration of sectional conflict arising from the natural clash of districts in different stages of economic development, we have the free-silver campaign of 1896, when the mining, agricultural, and debtor communities of the West and South arrayed themselves against the industrial and creditor communities of the East and North. The typical political struggles of the past have been territorial, and sectional problems will always remain. Now that the frontier has disappeared, however, the typical political struggles of the future will take the form, probably, of class against class.

Characteristics of the American People. — Although the frontier has disappeared, the pioneer work of " winning a continent from nature and subduing it to the uses of man " has left an indelible impress upon the American character. In the beginning the dangers and hardships of the frontier acted as a powerful selective force in determining the character of our earlier immigrants, giving us an unusually restless, mobile, and enterprising people. The process of settlement which followed merely emphasized these qualities and added others of a kindred nature. The primitive settler, following the trapper and the

trader into the wilderness, was forced to depend upon himself for protection and subsistence; he expected little aid from the government, was unused to the restraints of law, and a little contemptuous of its possibilities, either for good or for evil. The process of settlement, then, merely confirmed the American in that excessive individualism which has made him independent and resourceful, to be sure, but partial to the spoils system, tolerant of lynch law and labor violence, indifferent to waste and weakness in the administration of his government.

At the same time the great natural wealth of our land and the ease with which it could be secured from the government have taught our people, particularly in the West, to regard nature rather than thrift as the source of wealth, to exploit rather than create, to work and study as we farm, — extensively. As a people, we are optimistic but careless, generous but wasteful, buoyant but boastful. Industrially, we have risen to our exceptional opportunities with spirit, playing the commercial game at times with excessive energy and devotion; but we have come to emphasize quantity rather than quality, product rather than finish. We "lead the world" in the use of labor-saving machinery, but depend largely upon Europe for our skilled artisans.

Growth of Population. — The mere growth of the American people has been as striking as it is familiar. In 1640 there were about 25,000 persons, excluding Indians, in British North America; about 260,000 at the end of the seventeenth century according to Bancroft; according to the same authority the million mark was reached in 1743; and in 1790 the first federal census showed a population of 3,930,000 in the United States alone. In the next hundred years the population doubled every twenty-five years on an average, and although the rate of increase has fallen off somewhat since the Civil War, we are still growing at a remarkable pace, the population of continental United States being 91,970,000 in 1910.

Despite this enormous increase, the population of this country has not multiplied more rapidly than the means of subsistence. This does not mean that every one receives enough to live in

comfort. On the contrary, great masses of people live in poverty. Neither does it mean that society as a whole produces enough to support every one in comfort, if the wealth produced were equitably or evenly divided. On the latter point there is deep difference of opinion. But with respect to the movement over long periods, say during the preceding century, there can be no doubt that wages and real income have risen, not without interruption, but with comparative steadiness.

The dismal predictions of overpopulation which were so common in the first half of the nineteenth century have been signally discredited as practical propositions applicable to the American people of this epoch. The exploitation of national wealth, the improvement of business organization, and the invention of labor-saving machinery have more than kept pace with the population; and it appears that over long periods prosperity and high wages tend to depress rather than to raise the birth rate, even of the wage-earning population. We are in no danger of a " devastating torrent of children."

On the contrary, the real problem of the twentieth century, or at least the problem that has evoked the greatest discussion, is found in the steady decline of the birth rate. According to some eminent authorities, the race is dying at the top, the ablest and most successful people have the smallest families; and this constant sterilization of the ablest stock is, in the opinion of such authorities, second in importance to no problem which Western civilization is called upon to solve. It is not that we want more people. Population is still increasing with sufficient rapidity. The problem lies in the apparent failure of the most efficient individuals to multiply as rapidly as certain classes of the less efficient. Other authorities, it should be added, maintain that this " race suicide " has been going on for centuries, that it has not in the past, and will not in the future, lower the vitality or general efficiency of the race. Such writers view with complacency the ceaseless sterilization of the upper classes, maintaining that the process stimulates the ambition of the abler members of the lower classes by creating room at the top, and that so long as the habits and ideals of the upper classes

remain wholesome, there is no cause for regret that the individuals who compose these classes are not self-perpetuating. Social heredity, not personal heredity, the preservation of sound morals, wholesome customs, and habits of social helpfulness, together with the opening up of new opportunities, are according to these writers the important factors.

Second only in importance to "race suicide," and intimately connected with it, is the problem created by the rush to the city. In 1790 about 33 Americans in every thousand lived in a city of 8000 inhabitants or more, in 1910 approximately 390 in every thousand lived in a city of this size. The mere facts in this connection are familiar to every one and need no elaboration. Their importance lies in the fact that the rush to the city is apparently universal, that it has been going on for centuries, and that it indefinitely complicates and aggravates the social, industrial, and political problems of our time. "Race suicide," for example, is more attributable to social conditions created by city life than to any physical incapacity of the women of this generation to bear children; the evils commonly charged to the factory system are due as much to city crowding as to the factory system itself; and, speaking generally, whatever plan of reform for existing evils we devise or champion, we must reckon with this deep-rooted and persistent force which draws to the city so much of the best talent and ability which the rural districts produce.

Slavery and the Negro Problem. — From the earliest period of settlement, one of our fundamental industrial problems has been to get enough labor to exploit the great national wealth of the country. The first solution attempted was by importing bondsmen or indentured servants. "Nearly all the immigrants that came (to Virginia) between 1620 and 1650 were bondsmen," and in 1680 an English official estimated that about 10,000 persons were kidnaped or "spirited away" to America every year. This class of indentured servants consisted of runaway apprentices, penniless debtors, kidnaped children, honest laborers, vagrants, and criminals of all kinds. They were sometimes subject to the most inhuman treatment, but, because

they had white skins, soon melted into the free population and never created a race problem.

The first negro slave landed in Virginia in 1619. For about thirty years they did not increase very rapidly, but after that, and until the close of the eighteenth century, they multiplied with greater rapidity than the white population. In 1790 there were 750,000 negroes or persons of negro descent in this country, constituting 19 per cent of the population. Since 1790 the negro population has steadily declined in relative importance, and in 1910, numbering 9,830,000 in all, it constituted only 11 per cent of the general population. The relative decline of the negro population is probably not due to white immigration, since the natural growth of the white population is markedly greater than that of the negroes in the South, where white immigration has been unimportant. The whites have increased faster than the negroes even in those countries in which the negroes greatly outnumber the whites.[1]

The negro problem to-day, so far as it is an economic problem, arises largely from the ignorance and economic weakness of the negroes and the exploitation to which their ignorance and weakness subject them; from their concentration in certain narrow districts of the South, known as black belts; their dependence upon credit advances; their inability readily to take up diversified farming and, outside of the farming districts, from the social pressure which confines them to a relatively few occupations, most of which — particularly as they practice them — are neither uplifting nor developmental. In 1900, for instance, 63 per cent of the male and 90 per cent of the female negro breadwinners were employed in unskilled trades.

This condition of affairs is due in some degree to the economic inertia and shiftlessness of the negroes themselves. Considering the circumstances attendant upon their introduction into this country, it would be surprising if they were not economically backward. But present conditions are also due

[1] The greater increase of the whites "holds generally, though not universally, good in even the most overwhelmingly black of the black counties of the black belt." — John C. Rose, in *American Economic Review*, vol. iv, p. 292.

in part to race prejudice of their white brethren. There is a strong movement in the South today for enforced segregation of negroes, both in urban and rural communities; and the trade unions evince a growing disinclination to receive negroes as members on the same status as white workmen.

Vigorous efforts, however, are now being made in the South to provide industrial training of a systematic kind for the negroes; and despite the asserted facts that "only 37 per cent of the negro school population of the South is in school attendance," that "in the rural South today not one black child in four is in school," and that "the public school system for negroes in the rural South is worse today than it was twenty years ago, with a smaller percentage of enrollment and smaller proportion of teachers," [1] the economic status of the negro in recent years, particularly that of the negro farmer, shows steady improvement. But yesterday a slave, it is inevitable that the negro should be forced to traverse in the forward path the intermediate steps of serfdom, peonage, and tenancy before becoming farm operative and owner. No class can be transformed in a day by legislative enactment from the status of slavery to that of free contract. In the South during the last census decade the number of negro farmers increased more rapidly than the number of white farmers; the acreage of land operated by white farmers decreased while that operated by negro farmers increased 10 per cent; the value of farm land and buildings owned by whites increased 117 per cent, but the value of farm land and buildings owned by negroes increased 156 per cent; while the number of negro farm owners increased 17 per cent as contrasted with an increase of 12 per cent in the white owners of farms. The negro has been barred from the cotton mill. If the negro farmer can learn to raise something other than cotton and raise it on something other than credit, he will probably have little cause to regret his exclusion from the cotton mill.

Immigration. — Next in importance to the negro question is

[1] W. E. B. Du Bois, *Quarterly Publications of the American Statistical Association*, vol. xiii, p. 83.

the problem of immigration. We have always had an immigration problem. "Governor Thomas Dongan, in 1685, made a report to the King of England full of dreadful forebodings as to the future of the 'Royal Province' of New England unless the tendency to overcrowding were promptly checked. . . . George Washington and Thomas Jefferson are both recorded as opponents of an unrestricted policy of immigration, and it may be safely asserted that no considerable period has elapsed since their day without producing eloquent and forceful advocates of a rigid restrictive immigration policy."[1] Owing, however, to the extraordinary increase of immigrants in recent years (the number rose from 3,840,000 in the decade ending in 1900 to 8,796,000 in the decade ending in 1910) unusual interest in the subject has been aroused, the restrictive features of our law have been repeatedly strengthened, and on three occasions bills aiming to restrict the general volume of immigration by literacy tests have passed Congress only to be vetoed by the President.

Most of the alarm which has recently been expressed, however, is due to the change in character, rather than the increase in volume, of our immigration. Instructive statistics bearing upon this point are given in Table I. Until nearly the last decade of the nineteenth century most of the immigrants came from the United Kingdom, Germany, and northwestern Europe, while since that time the arrivals have been largely from southern Europe; and it appears that the new immigrants are more illiterate, much less likely to bring over their families and to remain permanently in this country, display less interest in taking out naturalization papers, and show a larger proportion of unskilled, as well as a smaller proportion of skilled laborers, than the earlier immigrants. "These people," it has been said, "have no history behind them which is of a nature to give encouragement. They have none of the inherited instincts and tendencies which made it comparatively easy to deal with the immigration of the earlier time. They are beaten men from beaten races, representing the worst failures in the struggle

[1] Commissioner of Immigration, Robert Watchorn, in *The Outlook*, vol. lxxxvii, p. 900.

TABLE I

TOTAL NUMBER OF IMMIGRANTS (IN THOUSANDS) AND PROPORTION COMING FROM DESIGNATED COUNTRIES BY SPECIFIED PERIODS: 1821–1910 [1]

	1821 1850	1851 1860	1861 1870	1871 1880	1881 1890	1891 1900	1901 1910
Total Number	2456	2598	2315	2812	5247	3844	8795
Per cent							
Germany	24.2	36.6	34.0	25.6	27.7	14.1	3.9
Great Britain	15.0	16.3	26.2	19.5	15.4	8.9	6.0
Ireland	42.3	35.2	18.8	15.5	12.5	10.5	3.8
Norway, Sweden, and Denmark	0.7	0.9	5.4	8.6	12.5	9.9	5.7
Total	82.2	89.0	84.4	69.2	68.1	43.4	19.4
Austria Hungary	....	....	0.4	2.6	6.7	15.5	24.4
Italy	0.2	0.3	0.5	2.0	5.9	17.1	23.3
Russia and Poland....	0.1	0.1	0.2	1.8	5.0	15.4	18.2
Total	0.3	0.4	1.1	6.4	17.6	48.0	65.9
All other Countries ...	17.5	10.6	14.5	24.4	14.3	8.6	14.7
Grand Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

for existence. Centuries are against them, as centuries were on the side of those who formerly came to us." [2]

There can be no doubt about the real gravity of the problem. In times past charitable associations, and even certain foreign governments, "assisted" the poorest and neediest of their

[1] Data from Adams and Sumner, *Labor Problems*, p. 73, and the *Statistical Abstract*, 1913, p. 94. These figures are not exact and not altogether comparable, owing to changes in the immigration year, the distinction of nationalities, and the immigration laws. For the effect of these changes, see Boeckh, "The Determination of Racial Stock among American Immigrants," *Publications of the American Statistical Association*, December, 1906; and Willcox, *National Civic Federation Review*, November, December, 1906, p. 7. In the year ended June 30, 1914, the number of immigrants (1,220,000) was larger than in any previous year except 1907, and Austria-Hungary, Italy, and Russia contributed 67 per cent of the total.

[2] Walker, "Restriction of Immigration," *Discussions in Economics and Statistics*, vol. ii, p. 447.

TABLE II

PROPORTION OF EUROPEAN IMMIGRANTS 14 YEARS OF AGE OR OVER WHO CAN NEITHER READ NOR WRITE: 1899–1909[1]

(Average proportion for all races, 26.6 per cent.)

UNDER 15 PER CENT		OVER 15 PER CENT	
Race	Per Cent Illiterate	Race	Per Cent Illiterate
Bohemian and Moravian	1.7	Armenian	24.1
Dutch and Flemish	4.7	Bulgarian, Servian, and Montenegrin	41.8
English	1.1	Croatian and Slovenian	36.4
Finnish	1.4	Dalmatian, Bosnian, and Herzegovinian	36.4
French	5.4	Greek	27.0
German	5.1	Hebrew	25.7
Irish	2.7	Italian, South	54.2
Italian, North	11.8	Lithuanian	48.8
Magyar	11.4	Polish	35.4
Scandinavian	0.4	Portuguese	68.2
Scotch	0.7	Rumanian	34.7
Spanish	14.6	Russian	38.5
Welsh	2.0	Ruthenian	51.0
Not specified	6.7	Slovak	22.1
		Syrian	54.1
		Turkish	58.9

citizens to migrate to this country; famine and revolution in Europe spurred the impecunious and the radical to take refuge among us; regularly, also, the tide of immigration has ebbed and risen in close correspondence with the business prosperity of this country, artificially swelling our laboring population in times of industrial activity, encouraging our industrial managers in their spasmodic, jerky methods of production, and thus augmenting the severity of our alternating periods of industrial depression. Moreover, in certain industries the immigrant with his relatively low standard of living has driven out the native workman; and most of the immigrants have shown an unfortunate tendency to linger in the cities of the eastern sea-

[1] Data from Jenks and Lauck, *The Immigration Problem*, 3d ed., p. 35.

board, swarming in the slums and intensifying all those social evils which have their origin in urban congestion.

The problem is chiefly economic, and the social or moral delinquencies of the newer immigrants have been greatly exaggerated. Thus, the new immigrants are far less given to alcoholic excesses than the old. But the investigations of the United States Immigration Commission, to quote from its report, "show an oversupply of unskilled labor in the industries of the country as a whole," and the Commission recommends that "a sufficient number be debarred to produce a marked effect upon the present supply of unskilled labor." "As far as possible," the report continues, "the aliens excluded should be those who come to this country with no intention to become American citizens or even to maintain a permanent residence here. . . ." A majority of the Commission recommended the literacy test as the "most feasible single method" of properly restricting immigration; realizing that it would cause occasional hardship — as any standard must — and that not all literate immigrants are desirable, and not all illiterate immigrants undesirable; but favoring it because it offers a practicable and simple means by which to reduce numbers without impairing quality or discriminating against particular nationalities. Not in individual cases, but in the net result, the literacy test would debar those classes which exploit America rather than strengthen it, and fail to rise to its real opportunities and responsibilities. Back of the demand for restriction is not the "American" snob, but the trade union.

In the light of history, on the other hand, the immigration problem is far less alarming than it is in the dry light of recent statistics. In the first place, the statistics themselves, as ordinarily published, are misleading, because they take no account of the large number of immigrants who return to Europe. The most recent census statistics (1910) indicate that about "two fifths of the immigrants who arrived in the United States during the decade 1900–1910 either left the United States or died before the end of the decade." In the second place, the importance of the number of immigrants depends largely upon its relation

to the population of the country; and relatively to the population immigration seems to be declining rather than increasing. For instance, the proportion of foreign born in the population has varied very little since 1860; and immigration reckoned in proportion to the population was heavier in the period 1850–1855 than in the period 1900–1905. In the next place, it is to be noted that our immigration laws regarding the exclusion of diseased, criminal, immoral, feeble-minded, and indigent persons are constantly becoming stricter and their administration more efficient. In addition to the plainly undesirable classes just noted, Chinese laborers have been excluded since 1882, aliens under contract to take up particular work since 1885, and anarchists since 1903. Finally, and most important, perhaps, agencies for educating, distributing, and Americanizing the immigrants have multiplied with great rapidity in recent years. Social settlements, vocational and night schools have undertaken the work of educating the immigrant; many important labor unions have learned to organize the immigrants, and so make of them allies and not enemies in the task of maintaining and improving conditions of employment; federal and state bureaus of information assist in the proper distribution of the immigrants, and public employment bureaus in finding work for them; while a group of powerful and philanthropic immigrant aid societies like the Italian Immigrant Bureau and the Hebrew Sheltering and Immigrant Aid Society "do effective work in Americanizing the immigrant, finding employment for him at good wages, overcoming tendencies toward congestion, effecting distribution, and promoting acquisition of American standards of living and thinking." [1]

Surveying the whole history of immigration, three general conclusions may be drawn which must be fully considered by those engaged in the solution of the present problem.

1. We have, as a people, shown a marvelous ability to assimilate rapidly people of diverse races, tongues, and religions, amalgamate them and stamp them with the characteristic qualities of the American. Even at the close of the eighteenth century,

[1] Max J. Kohler, *American Economic Review*, vol. iv, p. 107.

about one fifth of the population spoke some other language than English as their mother tongue, and probably one half of the population were of other than Anglo-Saxon blood. The heterogeneous character of the population is illustrated by the fact that nine of the men most prominent in the early history of New York represented as many different nationalities.

2. We have failed, however, to amalgamate the Negro and the Chinese; the incidental feature of a dark skin creates especially difficult problems; and it is this fact which makes it undesirable that Japanese, Chinese, or Hindu laborers should settle here in large numbers, particularly in separate "colonies." Despite the high qualities of some of these peoples, it is conceivable that they might come to this country in sufficient numbers to create a problem similar in character and gravity to the negro problem; and if investigation show that there is real probability of such a result, they should be excluded, even though the danger be attributable to race prejudice of the natives rather than the clannishness and exclusiveness of the immigrants.

3. In the main, however, the traditional policy of this country has been "to improve rather than to check immigration," and the burden of proof is upon those persons who would restrict immigration by arbitrarily limiting the number of immigrants.

Natural Resources. — Next to the character of the people with which this continent has been stocked, the most powerful factor in shaping the economic development of the United States has been its enormous natural wealth. With a territory (excluding Alaska and our insular possessions) more than three fourths as large as all Europe, indented, particularly on the eastern coast, with a large number of good harbors, intersected by internal waterways that make communication cheap and easy, endowed with water power that in the opinion of one authority is probably "more valuable than those of all other lands put together," marked by every variety of climate and soil, covered in many places, at least originally, with magnificent forests, and liberally stocked with almost every variety of mineral wealth, it is not surprising that at the present time the United States "leads the world" in the production of iron and

steel, cotton, coal, coffee, gold, silver, dairy products, corn, wheat, lead, lumber, tobacco, petroleum, and hogs. It would be strange, indeed, with the vast mineral and agricultural resources at our command, if we did not " lead the world " in many things.

Public Lands. — Of our 2,973,000 square miles of territory about three fourths at one time or another has belonged to the central government. The possession of this vast common treasure by the United States has played an important part in dignifying and strengthening the federal government. But the lavish alienation of the public lands in endowing free schools, subsidizing railways and other internal-improvement companies, and in providing free homes for the landless, has been an even more potent factor in hastening our economic development; though it has led, as has been said with some justification, " to the ravishment rather than the development of our natural resources."

Even more important is the influence which " free land " has exerted upon the wages of labor and the distribution of wealth in this country. While it was not until the passage of the Homestead Act in 1862 that land could be legally acquired without cost by simple occupation and cultivation, it is practically true to say that from the seventeenth century until a few years ago any enterprising citizen could, by the exercise of a minimum amount of industry and frugality, secure a homestead large enough to support himself and family. This opportunity offered to the artisan a free choice between wage service and farming, constantly depleted the ranks of mere laborers, operated to keep wages as high as the earnings of a " no-rent " homestead, and kept fresh and vigorous that feeling of independence which has been the distinguishing mark of the American workingman. Up to June 30, 1909, according to President Van Hise, the United States had sold or disposed of to corporations and individuals 571,600,000 acres; it had granted to the states for various purposes 153,500,000 acres; 324,500,000 acres had been reserved for parks, forests, and other public purposes; while there were 363,300,000 acres still unreserved and unappropriated, not counting 378,000,000 acres in Alaska, of which all but about

10,000,000 acres were unappropriated and unreserved. The lands which were sold brought less than it cost to acquire, survey, and carry them. At the date mentioned 127,000,000 acres had been given away under the Homestead and Timber Culture Acts — supposedly to actual settlers — and 142,000,000 had been given to corporations to stimulate the building of railroads and other internal improvements.[1]

How long the public lands will hold out it is impossible to say. Notwithstanding the fact that the national government is disposing of its lands at the rate of from fifteen to twenty million acres a year, there is still left — if we count Alaska — almost as much territory as we have alienated since the adoption of the Constitution. Most of this is worthless or unavailable; but irrigation and dry farming are reclaiming certain districts.

In the East, especially, we have almost certainly entered upon a new era, and it must be remembered that fifteen sixteenths of the population reside in the eastern half of the United States. East of the Mississippi trade and manufactures taken together have outstripped agriculture, and a large majority of the people lack the inclination and necessary training, even if they possessed the courage and energy, to avail themselves of possibly cheaper lands elsewhere. Whatever the quality of this cheap land, its importance has diminished as an outlet for the population upon whose economic condition it formerly exerted so salutary an influence. Considering the population as a whole, the conclusion seems irresistible that we have reached, if indeed we have not already passed, the parting of the ways; and the assistance that free land has rendered in maintaining wages and restraining the evil tendencies of the modern system of capitalistic production must in the future be secured from other sources. The distinctive Americanism of the past was generated, as has been said, in the performance of our national task " of winning a continent from nature and subduing it to the uses of man "; [2] it was a product of the frontier. But the frontier has now disappeared.

[1] Charles R. Van Hise, *The Conservation of Natural Resources in the United States* p. 294.

[2] E. L. Bogart, *Economic History of the United States*, p. 1.

QUESTIONS

1. What peculiar characteristics mark the economic stages of the United States?

2. Is the pastoral stage through which the people of our Great Plains have passed essentially different from the pastoral stage through which the people of Israel passed?

3. Enumerate the great sectional struggles which have disturbed the United States. Why does radicalism accompany the frontier?

4. Has the frontier and the work of settlement left a *permanent* impress upon the American people? Of what kind?

5. How rapidly is the population increasing at the present time? Are the richer or poorer classes multiplying more rapidly? Can you state the reason?

6. What are the distinctively economic factors of the negro problem?

7. When did the immigration problem first alarm residents of this country? What charges are directed against the "newer immigrants"?

8. Have we shown an ability to assimilate all kinds of immigrants? What has been the historical policy of this country toward immigration?

9. What part did the public domain play in bringing about and preserving the Union? in maintaining wages?

10. How does the growing size of the country modify the influence exerted by free land?

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CHAPTER VI

THE ECONOMIC DEVELOPMENT OF THE UNITED STATES (*Continued*)

In the preceding chapter attention was confined to certain fundamental and peculiarly American conditions which have influenced the economic development of this country. They form the background and setting of the picture. When we come to fill in the details, however, the general effect is very similar to that produced by the description of English industrial development given in Chapter IV. There are differences, of course, — differences important enough to make this separate discussion of American economic evolution necessary. But, on the whole, it is surprising how rapidly we have developed the industrial maladies and economic problems of the Old World.

Mercantilism in America. — In the American colonies, as in England itself, the Industrial Revolution was preceded by a period in which trade and industry were subject to minute regulation by the government. Bounties were freely offered in several colonies for the manufacture of leather, iron, paper, silk, and cloth; land grants were made and taxes remitted, particularly in the support of the iron industry; and in order to encourage the home manufacture of shoes, for instance, the General Court of Massachusetts in 1640 commanded that every hide "be sent to a tannery under penalty of a £12 fine," while "leather searchers" were appointed to see that the law was obeyed.

This early colonial regulation was restrictive as well as protective. In the New England colonies, in the seventeenth century, laws were repeatedly passed prohibiting idleness, fixing the hours

of labor, and prescribing rates of wages, with appropriate penalties for workmen who took or employers who paid more than the legal rate. In the Boston Town Records of 1635, for instance, we find this resolution: "That Mr. William Hutchinson, Mr. William Colborne and Mr. William Breton shall sett pryces upon all cattel, comodities, victuals and labourers and Workmen's Wages and that noe other prises or rates shal be given or taken." But the restrictive laws, in general, failed dismally. The abundance of cheap land and the independent spirit generated by the pioneer life prevented the enforcement of obnoxious colonial laws, and eventually led the colonists into armed resistance against the restrictive legislation of the English government.

English Colonial Policy and the Navigation Acts. — In accordance with mercantilist views of colonial relationships, English statesmen of this period looked upon a colony as a community which was to supply raw materials for the industries of the mother country, secure its manufactured goods from the mother country; and so far as trade with the rest of the world was concerned, buy and sell through the mother country. In accordance with this general policy England gave bounties for the production in America of raw materials such as flax, indigo, naval stores, barrel staves, and the like, but restricted manufacturing proper — by prohibiting, for instance, the erection of mills for slitting or rolling iron, and furnaces for making steel — and fettered our commerce in a variety of ways.

The English laws were not so severe as might be inferred from our brief statement of their nature and purpose; they were laxly enforced; and it is to be remembered that England encouraged some industries while she attempted to destroy others. English colonial policy of this period was not so much malicious as mistaken. The important points for us are these: that it did not seriously hamper the development of American industry in general, while it did strengthen and stimulate in the American people that spirit of individualism which the industrial opportunities of the New World and the frontier conditions of the time combined to create. As a consequence the new nation,

created in 1789, was pledged to the doctrine of individual liberty, and its constitution contained specific guarantees of personal freedom not only in matters political, but in industrial and social relationships as well.

American Industries in 1776. — When the Revolutionary War broke out, American industry was still in a primitive stage. The extractive industries were, relatively, the most advanced. Large quantities of lumber and timber products were exported to Europe; the fisheries were in a prosperous condition; and shipbuilding had reached a really remarkable stage of development, — in 1775 "nearly one third of the tonnage afloat under the British flag had been built in American dockyards." Agriculture, however, was carried on in the most wasteful and unscientific way, owing to the cheapness and fertility of the soil; and manufacturing was still in the household stage. In the middle and New England Colonies spinning and weaving, the manufacture of shoes and food products, were carried on within the home; and, in fact, the typical farm household of this period constituted almost an independent economic unit, raising or making what its occupants consumed, and buying little save salt and a few necessary iron implements. Of manufacturing for sale and export, however, there was little worth mention. The absence of adequate means of transport was largely responsible for this state of affairs. The roads were little more than widened Indian trails. Some years later, when conditions were considerably improved, the roads were still so poor that "Madison spent a week going from New York to Boston by stage, while the cost of cartage of a cord of wood for a distance of twelve miles was three dollars." Agriculture, however, was the dominant industry of the country. In 1787 less than one eighth of the working population was engaged in manufactures, fishing, navigation, and trade combined.

The Industrial Revolution in America. — The Industrial Revolution was sudden, and in its consequences momentous in America as well as in England. The Revolutionary War, by interrupting trade with Europe, threw the American people upon their own resources: goods that had hitherto been im-

ported had now to be manufactured at home; a large number of new industries sprang up rapidly; and the idea became prevalent that the new nation must make itself industrially as well as politically independent of the Old World. The state governments endeavored to foster the new industries by protective tariffs, and this policy was later continued, in a moderate form, by the federal tariff act of July 4, 1789. Prizes were offered by various societies, and even by certain state governments, for the introduction of the new machines and methods which were revolutionizing industry in England. Attracted by one of these offers, Samuel Slater, "the father of American manufactures," who had been apprenticed to a manufacturer of cotton machinery, and was particularly familiar with Arkwright's machines and processes, came to this country in 1789, and in the following year started the first cotton *factory* at Pawtucket, Rhode Island.

The factory system secured its first real foothold, however, between 1806 and 1815, when the Non-Intercourse Acts, the Embargo, and the War of 1812, by suppressing trade with Europe, forced the American people to do their own manufacturing, and turned large amounts of capital, which had previously been employed in trade and shipping, into manufactures. The growth during this period of isolation was extraordinary. In 1804 only four cotton mills were in operation. "In 1807 there were fifteen cotton mills running 8000 spindles and producing 300,000 pounds of cotton yarn annually. In 1811 there were eighty-seven mills operating 80,000 spindles, producing 2,880,000 pounds of yarn per year and employing 4000 men, women, and children. In 1815, 500,000 spindles gave employment to 76,000 persons, with a pay-roll of $15,000,000 per year."[1] When resumption of peace with Great Britain opened the new American industries to the fierce competition of the older English manufacturers, many failures and much suffering ensued, as a consequence of which increased protection was granted in the tariff acts of 1816, 1824, and 1828. A little later, in the Middle Atlantic and New England states,

[1] Coman, *Industrial History of the United States*, p. 181.

the period of factory production had fully arrived. A separate class of wage earners was appearing, who were especially appealed to by new arguments concerning wages in the tariff discussions; workingmen's parties were organized; strikes and trades unions multiplied, and the latter were combined into municipal and state federations; in the thirties and forties radical reformers linked the " white slaves " of the North with the negro slaves of the South and worked for the abolition of both " wage and chattel slavery "; the factory town and the city slum became recognized economic conditions, and the dangers of the latter were multiplied by the heavy immigration after 1845. By the middle of the nineteenth century the Industrial Revolution was in full sway, and the economic triumph of modern capitalism was assured.

As might be supposed, the Industrial Revolution produced far less suffering and want in the United States than in England. The evils attributable to the Industrial Revolution in England were of two kinds. One arose from the rapidity and magnitude of the industrial change itself; the other was due, not to the change, but to the system under which the new industry was conducted — the system of capitalistic industry working in a régime of practically unregulated competition. In our country the evils resulting from transition alone were slight. Our manufacturing industries were scarcely started when the spinning jenny, the power loom, and the steam engine were introduced, and so almost from the beginning the factory system seemed the natural one. Thus, the change which in England was a *revolution* was in America an *evolution*, a process of construction with little destruction. And for a time even those evils inherent in the system itself were mitigated and disguised by the immense natural wealth of this country, the ease with which land could be obtained, and the unusual mobility of our working people which permitted them to take quick advantage of the unusual opportunities open to them.

But these ameliorating agencies served only to check and delay, not to destroy, the evil possibilities of the new industrial system. As free land has become less and less abundant, the

wage earners of the East have had forced upon them conditions of life which have kept down, although they have not absolutely lowered, their standard of life. Extremes of wealth and alienation of social classes have become so great as to arouse the apprehension of all thoughtful men. Labor riots that call for military interference testify to the fact that we have not escaped, that in the future we can hope less and less to escape, the friction that accompanies all unfraternal relations among men. We have been greatly blest in that we have escaped the worst results so long.

The Development of Agriculture. — The presence and power of those economic forces which softened the asperities of the new industrial system in America are revealed in a particularly striking way in the history of American agriculture. In England, it will be remembered, the changes in agriculture intensified the evils of the Industrial Revolution, led to the consolidation of small farms into large landed estates, and put the actual business of farming largely into the hands of tenants. None of these things happened in the United States. The great area of unoccupied land served as an outlet for our rapidly growing population, so that between 1850 and 1900 the number, acreage, and output of our farms increased more rapidly than our population. Farms were not consolidated but broken up; even today nearly two thirds of our farms are operated by their owners, and more persons are employed in agriculture than in any other branch of industry. There is a constant migration from the country to the city, to be sure, but this is in no sense due to the consolidation of farms. Thus between 1880 and 1910 the proportion of all "breadwinners" (persons ten years of age and over gainfully occupied) engaged in agriculture fell from 44.4 to 32.9 per cent. But great improvement in agricultural methods and machinery made it possible for the relatively smaller farm population to satisfy the demand for agricultural produce even more completely at the end than in the middle of the nineteenth century. That is to say, the machine power introduced into farming more than took the place of those persons and their descendants who abandoned agriculture. It

has been estimated, for instance, that in 1895 it actually required only about 120,000,000 days' work to produce the nine principal farm crops of that year, whereas, had they been produced by the methods and machinery of 1850, at least 570,000,000 days' work would have been required.[1]

But our free land merely served to postpone, it could not permanently prevent, the appearance in America of some of the agricultural conditions which accompanied the Industrial Revolution in England. The twentieth century ushered in a new era in American agricultural development. Between 1900 and 1910 the number and acreage of farms increased far less rapidly than the population, while farm tenancy grew, in close relationship, apparently, with an extraordinary increase in farm values. "The increase during the last ten years (1900–1910) in the value of farm property was equal to the total increase in the value of farm property in the United States from the landing of Columbus until 1900."[2] The value of farm land increased 118 per cent between 1900 and 1910; and the number of farms operated by tenants increased 16.3 per cent as against an increase of 8.1 per cent in the number of farms operated by owners. More important still, the average value of land, buildings and equipment per farm increased from $3560 in 1900 to $6440 in 1910. These figures reflect in part a simple change in the value of money; but they indicate as well the increasing importance of capitalistic methods of production in agriculture, the increasing difficulty of acquiring farm ownership, and the sharp halt which has been called upon the agricultural expansion which marked the last century. "We have now reached a stage in the history of this country when farmers in average years do not produce much more of the raw materials used for food, beverage, and clothing than is needed within the country."[3]

[1] H. W. Quaintance, "The Influence of Farm Machinery on Production and Labor," *Publications of the American Economic Association*, Third Series, vol. v, No. 4, pp. 27–29.

[2] J. L. Coulter, "Agriculture in the United States," *Quarterly Journal of Economics*, vol. xxvii, pp. 9–13.

[3] Coulter, *loc. cit.*

Manufactures. — In agriculture, however, the passage of time has not brought about a highly capitalized form of industry, the typical farm represents only a relatively small investment and is tilled by its owner, there is no sharp distinction between employees, unions of wage earners are practically unknown, and passage from the wage-earning to the employing class is still common. In manufactures, practically all these conditions have been reversed since the end of the eighteenth century. And it is the tone of the manufacturing industry rather than that of agriculture which represents the keynote of the modern economic movement, because agriculture is constantly decreasing while manufacturing and allied industries are constantly increasing in relative importance. At the beginning of the last decade of the eighteenth century, seven eighths of the working population were employed in agriculture, and the manufactured products of the country were valued at $20,000,000. Half a century later, in 1840, 77.5 per cent were employed in agriculture, 16.5 per cent in trades and manufactures alone, and the products of the manufacturing industries were valued at $483,000,000. Fifty years later, in 1890, 35.7 per cent were in agriculture, 24.4 per cent in manufacturing and mechanical pursuits, and the manufactured products were valued at $9,370,000,000. In 1909, to cite the latest figures, 32.9 per cent were in agriculture and 28.3 per cent in manufacturing and mechanical pursuits, while the value of the products had reached the enormous sum of $20,700,000,000.

The change in the character of the industry has been even more striking than its growth and expansion. In the first place, machinery and capital have become increasingly prominent. In 1850, for instance, $556 worth of capital was invested for each wage earner, while in 1909 the average amount of capital per wage earner was $2785.[1] In the second place, the organization of the industry has changed, so that the individual owner and ordinary partnership are rapidly being replaced by

[1] Owing to variations in the definition of "capital" and other similar changes, the statistical comparisons made in this and the preceding paragraph are not accurate, and are to be accepted as illustrations rather than measurements.

the corporation. At the beginning of the nineteenth century, corporations, though not unknown in commerce and banking, were very uncommon in the manufacturing industries. In 1909, incorporated companies employed 75.6 per cent of the wage earners and manufactured 79 per cent of the goods produced in all the manufacturing industries.

This change in organization has been a powerful factor in destroying the personal relation between the owners of capital and the wage earners who man their plants, and has thus helped to widen the growing breach between capital and labor. It has also contributed greatly to the concentration of industrial control. Law and custom in this country have combined to make the small stockholder in the largest corporations a virtual nonentity so far as practical participation in the management of the corporation is concerned; and the individual or clique of "insiders" who own a bare majority of the stock too frequently rule the business despotically. Incorporation, then, instead of introducing a greater measure of real industrial cooperation and thus democratizing industry, has too often turned out to be an ingenious device by which energetic promoters borrow or secure the spare savings of the community on the most flexible terms and with a minimum of responsibility. The corporation thus, while it appeared to be diffusing the ownership of industry, has in reality worked toward the concentration of industrial *control*.

Other forces, moreover, have been working toward industrial concentration, the most powerful of which, perhaps, has been competition itself. For many decades in this country the competition among rival manufacturers was bitter and practically unrestricted. Tied down to their large investments of fixed capital, they were compelled to stand and fight without quarter. In every such war the number of combatants tends to decrease. As old rivals are killed off, the successful acquire greater skill and greater power in the conflict. With the passage of time greater and greater equipment is required to give any hope of a successful struggle, and some of the contestants, learning prudence from the struggle, combine to increase

their fighting power. The inevitable result, whether through simple survival of the fittest or through combination, is a marked increase in the size and importance of the industrial unit. Between 1899 and 1909, for instance, the number of establishments in the factory industries increased only 29.4 per cent, but their capital increased 105.3 per cent, and the value of their products 81.2 per cent. In many of our most important industries the number of establishments is actually decreasing. In the manufacture of agricultural implements between 1880 and 1909, to take a single illustration of the many that might be cited, the number of establishments decreased from 1943 to 640, while the wage earners increased from 39,580 to 50,551, and the value of the products from $68,640,000 to $146,330,000.

There are industries, of course, in which no such consolidation has taken place, but they are unimportant in comparison with those in which it has. The extent to which the giant industry and large-scale production had come to dominate our manufacturing industries in the year 1909 is shown in the following table, which will repay careful study. Establishments of the largest size, *i.e.* those whose annual output exceeded $1,000,000, constituted a little over 1 per cent of the number of establishments, but manufactured nearly 44 per cent of all the goods. Nearly three fourths of the wage earners were employed in establishments having a capital of more than $100,000 each.

In the latter part of the nineteenth century the movement toward large-scale industry took on another phase. In addition to concentration or *centralization* of industry, we are now having a rapidly increasing *integration* of industry. Large business concerns are finding it profitable to carry on under one management several closely related industries. For illustration, take the case of the United States Steel Corporation. Here we have united under one management the American Bridge Company, the American Sheet Steel Company, the American Steel Hoop Company, the American Steel and Wire Company, the American Tin Plate Company, the Federal Steel Company, the Lake Superior Consolidated Iron Mines, the National Steel Company, the National Tube Company, and the Carnegie Steel Company.

TABLE I

STATISTICS OF MANUFACTURES CLASSIFIED BY SIZE OF ESTABLISHMENTS AS MEASURED BY VALUE OF PRODUCTS. UNITED STATES: 1909

		ESTABLISHMENTS WITH ANNUAL PRODUCTS WORTH				
	ALL ESTABLISHMENTS	LESS THAN $5000	$5000 BUT LESS THAN $20,000	$20,000 BUT LESS THAN $100,000	$100,000 BUT LESS THAN $1,000,000	$1,000,000 AND OVER
Establishments — Number	268,491	93,349	86,988	57,270	27,824	3,060
Per cent	100	34.8	32.4	21.3	10.4	1.1
Wage Earners — Number.	6,615,046	142,430	470,006	1,090,449	2,896,532	2,015,629
Per cent	100	2.2	7.1	16.5	43.8	30.5
Value of Products — Amt.	$20,672,051,870	$222,463,847	$904,645,664	$2,544,426,711	$7,946,935,255	$9,053,580,393
Per cent	100	1.1	4.4	12.3	38.4	43.8
Value Added by Manufacture — Amount.....	$8,529,260,992	$144,246,008	$509,907,934	$1,258,317,991	$3,572,746,038	$3,044,043,021
Per cent	100	1.7	6.0	14.8	41.9	35.7

Of the last itself, Mr. Charles M. Schwab said in his testimony, before the Industrial Commission:[1] "The Carnegie Company were large miners of ore — mined all the ore that they required themselves, to the extent of over 4,000,000 tons per year. They transported a large percentage of it in their own boats over the lakes; they carried a large percentage of it over their own railroad to their Pittsburgh works, and manufactured it there, by the various processes, into a great variety of iron and steel articles — I think perhaps a larger general variety of steel articles than almost any other manufacturing concern."

Transportation and Railways. — The industrial concentration of which we have been speaking does not necessarily lessen competition at all. It merely gives the business into the hands of increasingly powerful rivals among whom competition may be all the more bitter because of the size of the contestants. But in the principal transportation industries time has demonstrated that another rule prevails: competition has failed to protect the consumer, and the progress of consolidation has operated to emphasize the monopolistic character of the industry.

The history of transportation in this country since the establishment of the Union falls into three stages. The "turnpike period" extends from 1790, the year in which the first turnpike was constructed, until 1816, when steam navigation upon the Ohio River became fairly regular. The second stage, the "river and canal period," ends after the panic of 1837, and is marked particularly by the introduction of steam travel on the Hudson (1807), the Ohio, and Mississippi rivers (1808 to 1817), and the opening of the Erie Canal in 1825. The last stage, the "period of the railway," extends from about 1842 to the present time. In contrasting these periods, it is not meant to suggest that canals were not built before 1790, or that turnpikes are not important at the present time. As a matter of fact, a canal was built in Orange County, New York, as early as 1750; and the last few years have witnessed a rapid and costly improvement of our highways. These "periods" merely indicate the kind

[1] *Report of the Industrial Commission*, vol. xiii, p. 448.

of transportation facilities which at different times have been most prominent in the minds of the people.

In the development of the railway, certain approximately definite stages may also be distinguished. Between 1830 (when the first important railway — the Baltimore and Ohio — was opened) and 1840, the railways were short local lines used in large degree to supplement or piece out the rivers and canals. In the next period, 1840 to 1870, many new roads were built, and the process of "linear consolidation" — the linking together of local companies into through trunk lines — began. By 1869 both the New York Central and the Pennsylvania had effected through connections with Chicago. In the same year, the completion of the Central and Union Pacific railways linked the Pacific Ocean with the eastern railways, and the continent was spanned.

The period between 1870 and 1890 is marked by three striking developments. First, it was a period of feverish expansion: the railway mileage of the country increased from 52,000 to 160,000 miles, more than 200 per cent. Secondly, the completion of several through routes from the Atlantic seaboard to Chicago brought about a period of destructive competition, which led to discrimination and rebating in through traffic and the overcharging of local or non-competitive traffic. "Wherever competition appeared, discrimination followed; and in the scramble for business the stronger shippers were favored at the expense of the weaker. Where there was no competition the public felt that they were being oppressed by a monopoly, to make up for sacrifice rates elsewhere — a feeling which was intensified by the absentee ownership of the western roads."[1] Thirdly, this condition of demoralization led to a double reaction. The railways sought to restrain competition by the creation of pools and traffic agreements, while the people sought to protect themselves through legislation and the creation of railway commissions. The Federal or Interstate Commerce Commission was established in 1887.

The last period, from 1890 to the present time, has been

[1] H. C. Emery in *The Cambridge Modern History*, vol. vii, p. 706.

marked by an unprecedented amount of combination among competing roads, and by a growing belief that the railway industry is inherently monopolistic and must be subjected to public control. Thus, at the same time that the control of the magnificent railway system of this country — greater in extent than all the railways of Europe combined — has fallen into the hands of a comparatively small number of groups, the people themselves have perfected administrative machinery strong enough, it is hoped, to hold the monopoly in check. Very recently strong efforts have been made to preserve competition in the railway industry, but it is coming to be seen that in the main reliance will have to be placed upon regulation rather than competition. The amendment of the Interstate Commerce Act in 1906 is a public recognition of the fact that the old problem of private competition *versus* public regulation has given way to the new problem of public regulation *versus* public ownership; and public operation may be given a trial in the near future on the thousand miles of railroad which Congress (in March, 1914) authorized the President to construct in Alaska.

It would be almost impossible to exaggerate the part which transportation agencies, and particularly the railways, have played in the economic development of this country. Ours is a country of "magnificent distances," and because of this fact, it was particularly necessary that superior means of communication and transportation should be early introduced, if the country was to be held together. After the Revolutionary War there was real danger that the settlers west of the Alleghanies would be completely alienated. Washington was quick to realize this fact. "The Western settlers," he wrote to the governor of Virginia, shortly after the Revolutionary War, "stand as it were upon a pivot. The touch of a feather would turn them any way. They have looked down the Mississippi until the Spaniards, very impoliticly, I think, for themselves, threw difficulties in their way; and they looked that way for no other reason than because they could glide gently down the stream, without considering, perhaps, the difficulties of the voyage back again, and the time necessary to perform it in; and because they have no other means of coming to us but by long land transportations and unimproved roads."

This danger was averted by the building of the Cumberland Road, the introduction of steam navigation on the Ohio, and the completion of the Erie Canal. Later it looked as if the use of the Mississippi and other natural avenues of communication would link the Middle West more closely to the

South than the northeastern states, thus giving the South a preponderant influence in the inevitable struggle over slavery. This problem, however, was solved by the railways, which, unlike the rivers, ran east and west rather than north and south. The railway was thus a strong factor in the preservation of the Union. And since the Civil War, western settlement has followed the railway. It has been the great pioneering agency of the last half century, and is entitled to as much credit as the public land policy for the rapid settlement of the West.

In the development of our transportation facilities, however, the State has been from the very first an active partner of private enterprise. Not only has the State built roads, canals, and railways of its own, but it subsidized the private companies which engaged in similar enterprises, with prodigal liberality. Of the total state debts — $170,800,000 in all — contracted prior to 1838, $60,200,000 were chargeable to canals, $42,870,000 to railways, $52,600,000 to banks, $6,600,000 to roads, and $8,500,000 to miscellaneous objects. After the panic of 1837 there was little direct construction by the State of internal improvements, but national, state, and local governments vied with one another in assisting private companies by exemptions from taxation and by grants of land, money, and credit. How much these subsidies amounted to we do not know, but the aggregate must have been enormous, as appears from the statistics of land grants. "During the twenty-one years between 1850 and 1871, at which time land grants were discontinued, more than 159,000,000 acres were placed at the disposal of railroad corporations by the federal government and 55,000,000 by the state governments." [1] In their origin and genesis, therefore, as well as in their essential nature, the railways are quasi-public institutions.

The Labor Movement. — In the preceding pages we have seen how capitalistic industry under a régime of free competition passed from an earlier period of cut-throat rivalry to a later period of combination amounting in many cases to monopoly. A similar phenomenon is discernible in the labor movement. At the beginning of the nineteenth century there were probably less than a dozen trade unions in the United States, and we actually know of the existence of only one. Between 1825 and the panic of 1837, however, they multiplied rapidly, and efforts were made to unite the scattered "locals" of separate trades into broader national unions, and to confederate the unions of different trades into municipal and district federations. These efforts were only partially successful, however, and it was not

[1] Bogart, *Economic History of the United States*, pp. 195, 308, *passim*.

until after 1850 that permanent national unions were established, and not till the organization of the Knights of Labor in 1869 that a fairly permanent national federation was created. The Knights of Labor reached the zenith of its power about 1886, and since the panic of 1893 its place has been gradually taken by the American Federation of Labor, with which most American unions, except those of the bricklayers and masons, the Railway Brotherhoods, and the Industrial Workers of the World, are affiliated. In 1893 the membership of the American Federation of Labor numbered about 250,000. By 1914 it had grown to 2,020,671. These figures give some idea of the strikingly rapid growth of trade unionism in the last twenty years. As the membership of the American Federation of Labor is usually understated, and as there are probably about 750,000 members in organizations not affiliated with the American Federation, we conclude that the aggregate membership of American labor organizations at the close of the year 1914 amounted to about 2,750,000 persons, mostly men.[1]

There are at least five periods distinguishable in the history of American trade unionism: the *germinal period*, 1789–1825; the *revolutionary period*, 1825–1850, so called because of the close connection in this period between trade unionism and more radical reforms such as socialism and coöperation; the period of *nationalization*, 1850–1865; the period of *federation* 1865–1897; and the period of *collective bargaining*, 1898 to the present time. We speak of the present epoch as the period of collective bargaining because of the rapid expansion of unionism, and the establishment of many new national or district systems of collective bargaining after the industrial depression of 1893–1897; and because it is only in recent years that employers and the general public have recognized that the trade union is here to stay, and must be regarded as a permanent institution with which many employers of labor must bargain, whether they like it or not.

[1] Dr. Leo Wolman, in a recent careful study (*Quarterly Journal of Economics*, vol. xxx, p. 496), estimates the total trade union membership in the United States and Canada in 1910 as 2,223,000.

The avowed aim of the trade unions is a complete combination of all the workers in a given occupation or industry. The Brotherhood of Locomotive Engineers, for instance, probably counts among its members more than 90 per cent of all the locomotive engineers in North America, although there are few trades which are so completely organized as this. With the passage of time, moreover, the trade unions have made increasing use of the monopolistic principle of the closed shop — the principle which leads union men to refuse to work with nonunion men, and which finds expression in the trade unionist's new commandment: "Thou shalt not take thy neighbor's job."

The development of powerful combinations in the labor world has engendered a counter movement among the employers, which expresses itself concretely in the modern *employers' association.* Such organizations are not new; we have record of such an association among the master shoemakers of Philadelphia in 1789. But in recent years these associations have become permanent, formal, and aggressive. They fight the labor organizations with their own weapons, matching the lockout against the strike, the black list against the boycott, and the "labor bureau" against the "unfair list" with which the reader of trade-union journals is familiar. Most of the employers' associations, like most of the trade unions, have associated themselves for common action in a large national federation, the Citizens' Industrial Association of America, with which, in December, 1903, there were affiliated sixty national employers' associations, sixty-six State and district associations, and three hundred and thirty-five local or municipal associations of employers.

This fight between organized labor and organized capital return has forced the State, in the interest of industrial peace, to inaugurate "Wage Boards" and Boards of Arbitration and Conciliation. Some of these, such as the New Zealand Court of Arbitration, are empowered to enforce their awards upon employers and employees; while others, like the Canadian and some of the American State Boards of Arbitration, have no power to settle disputes authoritatively, although they may

make "compulsory investigations" and publish their finding as to the equities of the case. These and similar topics, however, are reserved for more detailed discussion in a later chapter.

State Regulation of Industry. — The growing interference of the State in the conflict between capital and labor brings us naturally to the general subject of the State in relation to industry. When the American colonies were planted, mercantilism was the dominant political philosophy; but, as we have seen, mercantilism gave way to a philosophy of individualism in the eighteenth century, under the combined influence of the reaction against the English Navigation Acts, the natural antipathy of a frontier community to legal restraint, the philosophy of Locke, and in a minor degree the teachings of the French physiocrats. The triumph of individualism, as a philosophical system, came at the critical period when our State and federal constitutions were in the making, and it thus became intrenched in the organic law of the nation, giving constitutional sanction to the doctrine of *laissez-faire*, and establishing a constitutional guarantee of *freedom of contract*, in accordance with which adult men were left "free" to work as long as they "pleased" (or were compelled), for whatever wages they were "pleased" (or forced) to accept. Under the influence of these doctrines, for instance, our courts have annulled such wholesome regulations as laws prohibiting payment of wages in store orders, and statutes limiting the hours of labor of men in bakeshops, or other exhausting occupations. Decades of experience have amply proved that the average wage earner is too weak to protect himself against many evils; but our constitutional law has made it exceedingly difficult for the State to protect him. Fortunately, however, the American people have a fashion of bending their constitutional law to fit the facts, not blinding themselves to the facts by worshiping the law; and in recent years the Supreme Court of the United States has sanctioned laws requiring the semi-monthly payment of wages, prohibiting the payment of wages in goods, and requiring the wages of certain miners to be based upon the weight of the coal before screening. Many of the State courts, however, are far less enlightened.

It is impossible to show in detail how the free trade and individualistic tendencies of the Revolutionary period gave way to a constantly growing program of State interference. The doctrine of *laissez-faire* was never adopted in its entirety, and year by year we have moved farther and farther away from it. State interference began with the adoption of a tariff act in 1789, "for the support of the government, for the discharge of the debts of the United States, *and the encouragement and protection of manufactures*"; reached almost a maximum in the Embargo Act of 1807; showed itself in the policy of internal improvements and State aid to turnpike, canal, and railway companies; brought us the great mass of labor and factory legislation which has been adopted by so many states since the Civil War; led in turn to the Interstate Commerce Act of 1887, the Sherman Anti-trust Act of 1890, the National Meat Inspection and Pure Food Laws; and finally culminated in the Clayton Anti-trust and the Federal Trade Commission Acts of 1914. Excessive competition among laborers, which forced them to accept work under conditions destructive of physique and morals, has led to the factory acts, prohibition of child labor, and limitation of the hours of labor of women; excessive competition leading to the adulteration of products and their manufacture under insanitary conditions has given us the meat inspection and pure food laws; excessive competition among corporations, leading to combination and oppressive monopoly, has brought us the anti-trust acts and regulation through State and national commissions. The rapid adoption of workmen's compensation and minimum wage laws by the State governments in recent years, is striking evidence that we have entered a new era, in which State interference and control is not unlikely to become excessive. Whether the individualistic character of industrial society endures or disappears, individualists and socialists alike are now agreed that the State must interfere. As a prominent English statesman expressed it, "We are all socialists now," although he merely meant by this statement that the passive theory of government has been wholly discredited.

Up to the present time State interference has had as its principal object the improvement and preservation of competition. The conscientious manufacturer who would not poison consumers for the sake of swelling his profits, the high-minded employer who would not "sweat" women and children merely to reduce the cost of production, the delicately scrupulous shipper who would not undermine a rival by forcing a common carrier to pay him rebates, — all these have suffered as much from the abuses of competition as the general public itself. Industry under the competitive régime is a rough game played for high stakes, and if it is to be played fairly, there must be intelligent rules of the game and an umpire powerful enough to enforce them upon all contestants alike. If the manufacturers of Massachusetts are prohibited from employing children under fourteen years of age while those of South Carolina are encouraged to do so, decency is penalized, and the victory goes to the contestant guilty of the greatest number of fouls.

State interference, as we have said, has had as its principal object the maintenance of competition upon a higher and more wholesome basis. But this has not been its sole object. Our recent regulation of public utility companies aims not to bolster up or preserve competition among such companies, but to introduce *a substitute* for competition; and it is possible that in certain lines of industry regulated monopoly may prove on the whole more beneficial than regulated competition. Whether it is desirable, whether in the long run it will be possible, to maintain a competitive as distinguished from a socialistic régime of industrial society, may be said to be the supreme economic problem of the twentieth century.

QUESTIONS

1. How do you account for the failure of the early colonial restrictive legislation?

2. What was the effect of English colonial policy and the Navigation Acts upon American manufactures? shipbuilding? American political philosophy?

3. What was the condition of American agriculture in 1776? of manufactures? shipbuilding? transportation?

4. Was the Industrial Revolution as important in this country as in England? Was it attended with as much suffering? Why?

5. What part has been played by war in the tariff and industrial history of the United States?

6. In what respects has the agricultural development of this country differed from that of England? from that of the manufacturing industry?

7. What changes have taken place in the organization of manufacturing industries in the last century?

8. What are the principal causes and effects of industrial concentration?

9. What is the difference between industrial concentration and integration? between large-scale production and monopoly?

10. What stages are distinguishable in the history of transportation and railways in this country?

11. What part did the State play in the development of railways? Is railway consolidation a recent phenomenon?

12. What movement has the development of trade unionism elicited from employers? from the State?

13. How did the doctrine of non-interference secure such a strong foothold in American constitutional law? What has been the principal object of State interference up to the present time?

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BOOK II

PRINCIPLES AND PROBLEMS

PART I

PRODUCTION AND CONSUMPTION

CHAPTER VII

ELEMENTARY CONCEPTS

In political economy many of the technical terms employed are often misunderstood because the same words are used in ordinary speech with inconsistency and confusion. Frequently we have to choose between the alternatives of being inconsistent and of violating current usage. The present chapter is devoted to a preliminary survey of some of the fundamental notions in political economy.

The statement is sometimes made that economics is a mere bread-and-butter science, and this charge is not without some foundation, since the science studies men in their endeavor to make a living, but it would be an error to suppose that we are concerned with only the sordid aspects of human nature. This is apparent if we enumerate the motives which impel men to acquire wealth.

Motives in Economic Activity. — (1) There is, in the first place, the endeavor to satisfy one's strictly personal wants, giving rise to the struggle for food, shelter, comforts, amusement, etc. These things are wanted for their own sake, because of the effect which they produce upon the individual acquiring them. We have here, in short, *the motive of self-maintenance and self-development.* (2) But every normal individual feels such a degree of affection for certain other people that he is also anxious for their maintenance and development. Striving for *the welfare of others* is a second motive which impels men to labor for the acquisition of material things, and in many cases is more effective as a spur to endeavor than the first. A man

will hold himself to the daily grind more persistently when he feels some one is dependent upon him than when he is standing alone.

Another motive is (3) the *desire to gain the esteem of one's fellows*. This motive may take the form of an endeavor to do one's part and to be deserving of the companionship of the class of people whom we admire. But much of our wealth acquisition is motivated by the hope of impressing our fellows with a sense of our own importance, to show that we are successful, admirable, enviable. When the income permits, old coats are discarded, not because they cease to give protection, nor because they have become æsthetically objectionable, but because the wearers wish to make a favorable impression upon other people. Part of the pleasure of owning fine houses may come from the fact that most people do not have them. This motive is not always a conscious one, since our standards of beauty or propriety may themselves have been the result in part of this desire for distinction. Somewhat similar to the desire for distinction is (4) the *desire for power*. Men like to dominate and command their fellows, and this want may be satisfied by means of the dollar as well as with the sword; hence our "Napoleons of Finance," "Captains of Industry," and "Railway Kings."

Again, (5) the *desire for activity* for its own sake may be mentioned. Enforced idleness is as painful as prolonged labor, except to the degenerate. This desire may result in the production of goods, but almost always it requires the use of goods that have been produced; as, for example, the implements of athletic exercise. Finally, (6) *religion* and the ethical sense may be important factors in controlling the economic activity of the individual. Observe, for instance, the difference in the history of the communistic experiments in which religious feeling has been strong and those in which it has been weak.

In this discussion the use of the word "motive" must not be taken to mean that all of the economic life of the individual is a consciously rational one, in which pleasures are balanced against pains in such a way as to secure the maximum surplus

of satisfactions. Man is, it is true, a rational being, and as such pursues definite lines of action under the influence of conscious motives; but he is also a creature of instincts and habits, and much of the economic activity of the individual has to be interpreted as the working out of instinct and habit. We speak, for example, of such things as the "instinct of workmanship," the "habit of industry," the "habit of saving," and the like. The foregoing analysis of the motives in economic activity is, however, broad enough if we remember that "pleasure" is something that is not always consciously sought, but is often to be understood as the result of the functioning of inherited instincts and acquired habits.

Utility. — As a result of these motives, human beings are striving for the possession of certain things. These we call goods. To understand the meaning of the term "utility" in economics, we must remember that economics is primarily a science of man. Goods may be of interest in chemistry and physics merely as things, but they have no significance whatever in economics until they come into relation with man. That fact in man which imparts to things a new character and makes them goods is the fact of human wants. *Anything that is capable of satisfying a human want is a good, and possesses utility.*

We need here to guard against a misunderstanding which the word "utility" might suggest. Utility is the power to satisfy wants, not the power to confer benefits. Cigars are as "useful" in the economic sense as bread or books, for all three satisfy wants. Economic wants may be serious, frivolous, or even positively pernicious, but the objects of these wants all alike possess utility in the economic sense.

Free Goods and Economic Goods. — But it is apparent that the wants we have mentioned are very unlike in character. Air and water, for instance, we seldom think of as things we want at all. We usually have them in abundance and without exertion, so that, though they satisfy wants as vital as any we know, we seldom spend any time thinking about them or our absolute dependence upon them. These are *free goods*, that is, goods that exist in quantities sufficient to supply all wants for

them. Land in a new country is frequently a free good. But the list of things that are free is quickly exhausted. *Economic goods are those which exist in quantities less than sufficient to satisfy all wants for them.* Hence, we must economize in the use of them, are willing to undergo sacrifice to obtain them, and usually they are obtained only by exertion. It is, however, their scarcity as compared to the human wants which they have the power to satisfy, and not the fact that they have cost labor, that makes them economic goods. Land, for example, a free gift of nature, is one of the most important of economic goods at the present time.

Effort. — Fortunately, the supply of economic goods can, in most cases, be increased by human exertion applied to the materials of nature; but this exertion, if carried beyond a certain point, is irksome, and this has an important effect upon the conduct of life. If the labor force of the community were unlimited, a great many of the goods which we now use sparingly would be as free as air. Idealists have pictured for us a condition of the future where a few hours' work per day for each individual (an enjoyable means of working off surplus energy) will be sufficient to supply us with all of the goods that we have time to consume. At present, however, most of us find that our consumption is limited by the pain of additional effort. The end of our economic activity is, therefore, not only to get the greatest amount of satisfaction, but also to minimize the amount of painful labor.

Waiting. — Another fact that persists in our economic life is the necessity for waiting. The people of the United States wished to have the Panama Canal, but they could not get it without years of waiting. They were obliged to spend millions of days of labor with no benefit in return for a long time. So in general the production of goods by modern methods, involving the investment of capital, requires *waiting* as well as *effort.*

Risk. — In a society characterized by private enterprise in industry, the risk of business failure is an important fact. The uncertainties of business life are obvious: A factory may be destroyed by fire, crops may be destroyed by storm and hail, a panic may destroy credit at a critical moment, fashions may

change, or competition may prove too strong. Some of these uncertainties may be eliminated by insurance, but others cannot be so eliminated. The corporation is a device by which the risk assumed by one individual is limited, although not eliminated. The trust and the monopoly tend to reduce the importance of the factor of risk, and under a system of State socialism it might possibly become a negligible factor in our daily economic life. As society is constituted at present, however, the production of goods to satisfy human wants is attended by risk, and, as we shall see later, society has to compensate those who take these inevitable business risks.

Services. — Goods have been commonly divided into (1) *material things*, such as food, clothes, and books, and (2) *personal services*, such as those of physicians, lawyers, musicians, teachers, household servants, and public officers.

The advisability of the distinction has been denied. Actors and singers, it has been urged, sell us perishable material things, *i.e.* light and sound waves of a peculiar kind. A recent writer also considers the distinction confusing because it obscures the fact that material things render services just as human beings do. The piano yields services as does the singer. From this point of view persons are durable economic goods along with cattle and wheelbarrows. But, on whatever ground the distinction is made, it is important to recognize that among the things that contribute to our well-being are some — personal services — that are so perishable that they must be used with the direct coöperation of some other human being, while in other cases the services are, as it were, stored up in some inanimate material things, and the relation between the producer and consumer becomes an impersonal one. The service of a musician, for example, is personal and must be used the moment it is rendered; the purchase of a musical instrument, on the other hand, means the purchase at one time of a long series of uses.

Personal Qualities as Goods. — The central point in our science is the conception of man in his relations to his environment, and hence it does not seem reasonable to include the personal *qualities* of men under the head of goods. Good health and technical skill make a man's services more valuable and assist him in the acquisition of wealth, but they are a part of him rather than of his possessions. It is his *services* that he sells, and it is these that we have placed under the head of goods.

When we consider the importance of the priceless heritage which the present generation has received in the shape of knowledge and skill, we might make these a separate category as immaterial goods.

On this point Professor Marshall says: "German economists often lay stress on the non-material elements of national wealth; and it is right to do this in some problems relating to national wealth, but not in all. Scientific knowledge, indeed, wherever discovered, soon becomes the property of the whole civilized world, and may be considered as cosmopolitan rather than a specially national wealth. The same is true of mechanical inventions and of many other improvements in the arts of production; and it is true of music. But those kinds of literature which lose their force by translation may be regarded as in a special sense the wealth of those nations in whose language they are written. And the organization of a free and well-ordered State is to be regarded for some purposes as an important element of national wealth." [1]

But knowledge does not exist in a disembodied state, and we shall omit nothing and avoid some confusion if we divide all goods into material things and personal services.

Wealth and Income. — Wealth may be looked upon either as a stock of things on hand at a particular time or as a flow of things during a period of time. When we ask how much a man is worth, it is customary in America to answer in terms of the value of his possessions, while an Englishman would answer in terms of annual income. The two ways of looking at the matter are not identical, however: What a man spends in a year may include a good deal spent in hiring other persons to do personal service for him, while an estimate of his possessions could not include the value of those persons unless they were his slaves.

What is to be considered as a man's income is not easy to say, as our law-makers have discovered in framing income tax laws. In economic discussions we have in mind net and not gross income. We may refer to the economic goods and services enjoyed during a period of time, to the satisfaction derived from these goods and services, or to their money value. Money income is commonly given a broader meaning to cover one's

[1] *Principles of Economics*, 6th ed., p. 59.

total net acquisition of money regardless of whether it is spent for consumption goods or is saved.

Individual Wealth and Social Wealth. — The distinction between the social and the individual standpoint meets us at many points in the study of economics. That which is wealth to the individual is often not wealth to society. An individual holding a government bond finds that he can exchange it for the things he wants almost as readily as though it were gold or some other commodity. He recognizes that the paper itself cannot be used directly for any useful purpose, yet he prizes it because it represents an indisputable claim on the services or commodities of other people. If the bond should be destroyed, the holder as an individual would suffer loss, but society as a whole would be neither richer nor poorer, and society, exclusive of the bondholder, would have gained at his expense. From the social standpoint the bond is not wealth at all, but only an evidence of a legal right to a part of the social wealth. All property rights are simply claims to a part of the social wealth or income. The claims to concrete, material things, such as farms and store buildings, are included by an individual when he enumerates his wealth; and farms and store buildings are social wealth. Again, in making an inventory of his wealth, an individual would not ordinarily include such an item as the post office, which is public and not private property; but, strictly speaking, the post office is owned by him jointly with other members of society. A successful patent is frequently looked upon as an item of wealth, but it is simply a means by which the owner gets more from other people in return for his services. If the patent is declared invalid, others gain what he loses (not counting the lessening of the inducements to invention). Again, "good will" in business is frequently paid for as though it was an economic good, and is wealth from the individual point of view, but it is not social wealth. If a business man loses his established trade, his competitors are the gainers; society as a whole is not affected.

Wealth and Value. — In the preceding paragraphs wealth has been spoken of as consisting of particular things. A lead pencil

and the year's crop of wheat are both wealth. How shall we measure the amount of wealth that these objects represent? Since the items of wealth are composed of very heterogeneous objects, we cannot use such units of measure as bushels, pounds, or feet. We must select a measure that has reference to some quality common to all kinds of wealth. Such a quality is *value*. This is a subject which will be discussed in detail later, the valuation of goods and personal services being the central problem in economic theory.

Capital and Other Forms of Wealth. — Some material things, as well as personal services, yield satisfaction to human beings directly. From clothes, dwellings, food upon the table, musical instruments, and the like, we derive enjoyment directly. These are *consumption goods*. Other goods are of service only indirectly. A plow, we say, is useful, but we cannot eat or wear it. It simply helps to produce the things that we can enjoy. Such articles are *production goods*.

The distinction is a matter of degree. Even the food upon the table is not quite ready to be enjoyed. It must be handled with knives and forks. This has led some writers to make no distinction between production and consumption goods. But it has been pointed out that great differences in degree are more important than many differences in kind. The distinction, it may also be noted, is not made on the ground of durability. Consumption goods — a painting or a book, for example — may be very durable.

Production goods, again, are divided into *capital goods* and *land*. Land is a gift of nature; capital goods — machinery, warehouses, raw material, etc. — are produced by man. Other differences between these two classes will be discussed later.

Capital Goods and Capital Value. — Capital goods, as well as other forms of wealth, are of such a heterogeneous nature that we cannot measure them by such units as pounds or inches. Here, again, we must select some quality that is common to all of them, which is value, and this can be measured in terms of dollars. Very frequently the value of capital goods is confused with the concrete good itself. A typewriter is a tangible, material capital good; its weight is measured by pounds; its bulk by cubic inches; its value by dollars. In this book the word

" capital " is frequently used as a short expression for either of the phrases " capital goods " and " capital value," but it will always be clear from the context which is meant.

Social and Individual Capital. — The individual may include items in an enumeration of his capital which are not capital from the standpoint of society. The landlord who has dwellings to let regards them as part of his capital, but from the social standpoint they are consumption goods. We may call such goods *acquisitive capital.* Again, a street railway may consider its franchise as a part of its capital, but from the social standpoint a franchise is not capital at all, nor even wealth, but is simply a right to use the streets in a certain manner. Destroy the franchise, and social capital would not be lessened, except, perhaps, in indirect ways.

Figure 1 will help to make these various distinctions clear:

Circle *AB* represents *goods.*
Circle *AC* represents *economic goods.*
Circle *AE* represents *producer's goods.*
Circle *AF* represents *land.*
Zone *BC* represents *free goods.*
Zone *CE* represents *consumer's goods.*
Zone *DE* represents *acquisitive capital.*
Zone *EF* represents *social capital.*

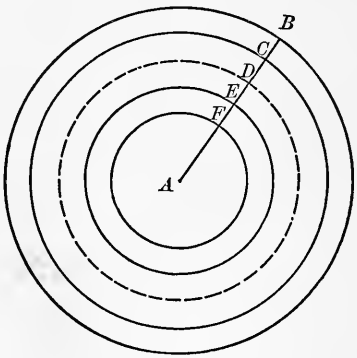

FIG. 1.

The National Wealth and the National Dividend. — Attempts have been made to ascertain the total wealth of a nation. The latest estimate made for the United States by the census authorities is given on the following page.

Such a table is useful, even though it may contain some rather arbitrary estimates, as showing the relative importance of different classes of our material equipment. Notice the small total value of the metals used as money and the relatively large value imputed to real property. It is rather surprising that manu-

facturing machinery, tools, and implements are worth less than our live stock. But great care should be taken in comparing the total wealth as estimated in this and in preceding census valuations and in drawing conclusions as to the significance of a growth in national wealth measured in dollars.

ESTIMATES OF WEALTH FOR 1912 AND 1900

FORM OF WEALTH	1912	1900
Total	$187,739,071,090	$88,517,306,775
Real property and improvements taxed	98,362,813,569	46,324,839,234
Real property and improvements exempt	12,313,519,502	6,212,788,930
Live stock	6,238,388,985	3,306,473,278
Farm implements and machinery	1,368,224,548	749,775,970
Manufacturing machinery, tools, and implements	6,091,451,274	2,541,046,639
Gold and silver coin and bullion	2,616,642,734	1,677,379,825
Railroads and their equipment	16,148,532,502	9,035,732,000
Street railways, etc.:		
Street railways	4,596,563,292	1,576,197,160
Telegraph systems	223,252,516	211,650,000
Telephone systems	1,081,433,227	400,324,000
Pullman and other cars not owned by railroads	123,362,701	98,836,600
Shipping and canals	1,491,117,193	537,849,478
Irrigation enterprises	360,865,270	
Privately owned waterworks	290,000,000	267,752,468
Privately owned central electric light and power stations	2,098,613,122	402,618,653
All other:		
Agricultural products	5,240,019,651	1,455,069,323
Manufactured products	14,693,861,489	6,087,151,108
Imported merchandise	826,632,467	424,970,592
Mining products	815,552,233	326,851,517
Clothing and personal adornments	4,295,008,593	2,000,000,000
Furniture, carriages, and kindred property	8,463,216,222	4,880,000,000

In addition to the difficulty of getting accurate information on these various items, there are several things to be kept in mind in making use of such an estimate. First, the returns are made in money, so that fluctuations in the value of money will show a change in the total valuation even if there is no real change in the relation between the wants of a community and its

supply of goods. Again, free goods are not included in such an estimate. Also, a good deal of public property does not have a money estimate put upon it. Who would attempt to say what our rivers and harbors are worth, and yet why should not these be included in the estimate if our canals are?

It seems that much that is included in the estimate is wealth from the individual standpoint only, but not from the social, as in the case of the valuation of a business whose value consists largely of patents or monopolistic privileges. In the table above, for example, the value of railway property was obtained by capitalizing railway earnings. Is this sum properly included in an estimate of the total amount of wealth in the United States? The inclusion is proper if we are confining ourselves to a statement of the sum of the values of property rights, but it is misleading if we wish to show the relative importance of railways and of property in a competitive industry, or if we are discussing railways in relation to the public welfare. A similar line of thought is suggested with reference to land values. Ten years ago we had about the same area and the same quality of land as we now have, so that its high value today cannot mean that we are better equipped with natural resources.

We must be on our guard against attaching improper significance to estimates of total wealth. Changes in total value are not an accurate index of changes in well-being. It is possible that an increase in concrete material goods will actually decrease the total quantity of wealth measured in dollars. A hundred bushels of wheat at $1 per bushel have a higher selling value than two hundred bushels at 40 cents per bushel. If by some magical process all goods could be made free as air, there would be no value whatever. An estimate of the value of our stock of wealth also necessarily omits to take account of personal services. It is obvious also that *per capita* wealth has more significance for well-being than has total wealth. Individual wealth and value connote scarcity; well-being implies abundance. Nevertheless, under present conditions, it is probable that an increase in *per capita* individual wealth, when not due to fluctuations in the value of money, also indicates an increase

in well-being. There is no likelihood of our being able to increase the quantity of economic goods to such an extent as to render them free and hence valueless; and, on the other hand, as will be more fully explained later, new wants are constantly developing, and value springs from the power to minister to unsatisfied wants.

The *national income* is a concept which takes account of the services rendered directly by persons as well as of the material things that are used. The national income, objectively considered, is a gigantic stream of food, clothes, comforts, personal services, etc., which is used up in the direct satisfaction of wants in a specified period, such as a year, by the millions of individual acts of consumption. Some writers would include also the additions to our industrial equipment, such as new machines; but these may be regarded as promises of an enlarged future income of society, not as part of its present real income. Thus we may distinguish between the annual national *product* and the annual national *income*.

It has been estimated that the average income per family was about $1500 in the United States in 1910.[1] The margin of error in this average may be very great, but even if it could be taken as accurately measuring the per family income of that year, it would not necessarily be an index of how well we might live under some organization of society that attempted an equal or nearly equal distribution of income. The effect upon the efficiency of management, the hours of labor, and the intensity of effort might be disastrous. On the other hand, there might be much saving from an elimination of wasteful and unnecessary expenditure without a reduction of real enjoyment, and there might be a fuller utilization of productive forces now going to waste. We refrain from entering this realm of speculation.

The national income may be looked upon as the *national dividend*, the sum total of good things to be divided among the various families or individuals. The forces determining the size of this dividend and the manner of its division are the main topics for discussion in political economy.

[1] W. I. King, *The Wealth and Income of the People of the United States*, Chap. ix.

QUESTIONS AND EXERCISES

1. Does the following statement agree with the definitions in the text? "The true basis for an estimate of a nation's wealth is to be found in the enjoyments of its members." Hadley, *Economics*, p. 4.

2. Are the following wealth: air? whisky? a copyright? Lake Michigan? skill as a carpenter? good health?

3. Discuss the following: "Among the motives which lead men to accumulate wealth, the primacy, both in scope and intensity, therefore, continues to belong to this motive of pecuniary emulation." Veblen, *Theory of the Leisure Class*, p. 34.

4. State the significance of the following: "A horse is not wealth to us if we cannot ride, nor a picture if we cannot see, nor can any noble thing be wealth except to a noble person." Ruskin, *Munera Pulveris*, p. 10.

5. Discuss the following statement: "In 1770 Arthur Young reckoned the income of England to be £120,000,000; in 1901 the income may be roughly set down at £1,600,000,000. Making correct allowances for population and for prices, this growth of income would signify a large increase of commodities per head; but would it tell us that we are working and living somewhat better than our ancestors?" Hobson, *The Social Problem*, p. 43.

6. How does the Federal Income Tax law (as interpreted by the Treasury Department) define a person's income?

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CHAPTER VIII

PRODUCTION

Production Defined. — Man creates no new matter. Neither the farmer nor the merchant adds one atom to the existing material of the earth. Yet they are both properly called producers because they increase economic utility. Production, then, means the creation of economic utilities by the application of man's mental and physical powers to the materials of nature. The act of production can be reduced to the following three operations: (1) changing the form of things, or combining or rearranging them, (2) changing their place, and (3) keeping them until such times as they are wanted; in other words, production adds to the materials of nature, *form* or *composition utility*, *time utility*, and *place utility*. Production thus defined includes the rendering of direct personal services.

It has seemed to some that the farmer is more truly a producer than the manufacturer, and the manufacturer than the merchant; but such is not at all the case. All of these industrial classes help at some stage in the process of getting the materials of nature ready for consumption. The miner gets iron ore from the ground, the manufacturer transforms it into stoves, the railway company transports them, and the merchant acquires a stock of them and keeps them until they are wanted. One stage is as essential as another if wants for stoves are to be satisfied. It may well happen that the utilities produced by the merchant could be produced with a smaller expenditure of economic force, and that by a better organization of the factors of production saving could be effected; but this is no justification whatever for the popular impression that he is not a productive worker. Things are not fully "produced" until they are in the form in which they are wanted, at the place at which they are wanted, and at the time when they are wanted.

In books on political economy we are likely to find that much more is said about the distribution of wealth than specifically about its production. The reason for this is partly that the problems of production are to a very considerable extent a matter of technical progress. How to increase the yield per acre is not specifically an economic problem. Nevertheless the economist is interested in the volume of production compared with the growth in population and in changes in the character of production. Misdirected production is thought to have something to do with economic crises, and changes in the production of gold may explain widespread changes in prices, so that production has in reality received a good deal of attention from economists in connection with their discussion of other subjects. In this book, for example, the relation of population to agriculture is considered in the chapter on Wages.

The close relation between production and distribution may be further illustrated by the subject of " scientific management " in industry. This means such an arrangement of work, selection of methods, and measuring of individual efficiency within a factory or elsewhere as to produce the maximum output per man. Take the simple operation of shoveling coal or cinders, where this must be done by hand. It has been found that the amount handled per day per man will depend on the weight of the shovel, its size, the amount taken at each lift, and the number of movements per hour. The largest shovelful is not likely to be the most economical. Such inquiries obviously have a relation to the wages which may equitably be paid to different workmen, and representatives of trade unions have looked upon the movement toward the utilization of scientific management with considerable suspicion and hostility as a system of driving men to greater exertion. It would seem that if there is coöperation between managers and trade union officials, total production may be increased and wages may be increased by scientific management without detriment to the individual workingman.

On the whole, it is probably true that the subject of production has in recent years been unduly neglected by economists. The

conservation movement, looking toward the less wasteful utilization of our natural resources, had its origin outside of economic circles. In recent years, however, the economists are very properly placing more emphasis upon the obvious fact that economic progress depends upon increasing the annual per capita production of wealth as well as upon improving the way in which wealth is distributed among its producers.

The Production of Values. — We have said that production means the increasing of economic utility. This is precisely equivalent to saying that it means the rendering of services that lead directly or indirectly to the satisfaction of human wants. And since we are not willing to pay for things that we do not want, it follows that every service for which we are willing to pay must be classed as productive. All money-making pursuits are, therefore, productive. Except through inheritance or gift or gambling or fraud or theft one cannot gain an income unless one gives a *quid pro quo* by rendering productive services or by permitting the use of some productive agent which one owns or controls. But it does not follow that money-making is a measure or gauge of the amount of productive service rendered or that production and acquisition always go hand in hand. For the amount of money that will be paid for commodities and services will depend upon their *value* rather than upon their utility; and *scarcity*, as well as utility, is a factor in determining the value of things.

Men can sometimes increase the value of things by curtailing the supply of them, although, of course, this decreases their aggregate utility. In the case of a monopoly, where the power to control the supply of a product is lodged in the hands of a single producer or group of producers, this often becomes a matter of much importance. The case of the Dutch East India Company, which is said to have destroyed half of its spice crop, because the remaining half would have a greater value than the whole would have had, has been cited by many economists. In some fishing centers part of an unusually large catch is destroyed or sold as fertilizer in order that the market price may not be unduly lowered. Most commonly, of course,

limitation of supply is effected by merely producing less than might have been produced and sold at a price high enough to cover expenses. In competitive enterprises, however, no one producer can control the supply of the product, so that in general the only way in which a producer can increase the value of his output is by increasing its quantity and, consequently, its utility. But it should be clear that we may get very different results if we measure the results of productive effort in terms of values from what we should get if we used utility as our measure. From the point of view of social welfare, the production of utilities is, of course, what we are interested in. But we have to recognize that in our modern exchange economy the production of values is what producers are mainly interested in. In later chapters we shall have to consider more carefully the extent to which these two principles of production are in harmony, and the ways in which they are in conflict.[1]

Factors of Production. — It has been customary to speak of three factors of production — nature, labor, and capital. Under nature are included all forces external to man, as the wind, the movement of water, attraction of gravitation, cohesion, etc. Frequently these things furnished by nature are called simply *land*, because, of what belongs to external nature, it is with land that we have principally to do in political economy.

Of the total land surface of the United States all but about 15 per cent had been appropriated or reserved in 1913. The unappropriated and unreserved portions were largely in Nevada, Arizona, Wyoming, and New Mexico. Of the total land surface, 46.2 per cent was in farms in 1910, and of these farms only 54.4 per cent consisted of improved land; that is, only 25.1 per cent of the total land area was improved farm land. "Improved farm land includes all land regularly tilled or mowed, land pastured and cropped in rotation, land lying fallow, land in gardens, orchards, vineyards, and nurseries, and land occupied by farm buildings." If all of the improved land were equally

[1] In a literal sense neither utility nor value is "produced." The things produced are commodities and services, which have utility and value because they satisfy human wants that would otherwise be unsatisfied.

distributed, there would be about five acres for each person in the United States. This figure has decreased slightly in the last quarter of a century, although the historical comparison is made somewhat uncertain by the fact that woodland at the census of 1900, 1890, and 1870 was included in improved land, but was not so included in 1880 and 1910. The production of the leading cereals per acre has not changed much since 1890 and on the whole the per capita production of wheat and corn measured in bushels has not increased since 1880.

In other lines of production the per capita story is quite different, as will be seen from the following table:

PER CAPITA PRODUCTION OF SELECTED COMMODITIES[1]

1880–1913

COMMODITY	1880	1890	1900	1910.	1913
Per Capita					
Wheat production — bushels	8.992	7.732	8.325	7.352	7.868
Corn production — bushels	29.769	29.483	26.722	30.341	25.220
Number of cattle on farms	.663	.824	.676	.716	.583
Coal production — long tons	1.378	2.257	3.145	4.671	——
Cotton production — 500 lb. bales	.114	.123	.136	.144	.152
Pig iron production — long tons	.074	.129	.192	.266	.319
Ton-miles of freight	——	1227	1799	2626	3106

Labor, as a factor of production, includes human activities of every sort, intellectual as well as physical, which have economic significance. We might better, perhaps, substitute man for labor as the second factor. Labor is supplied by human beings and is different from material goods because it is always connected with a personality. Moral and intellectual qualities increase its productiveness. Temperance, trustworthiness, skill, alertness, quick perception, a comprehensive mental grasp, — all these and other qualities belonging to the soul of man are of paramount importance. Man's mere physical strength in itself is a poor thing, being surpassed by that of the lower animals,

[1] Compiled from "Statistical Record of the Progress of the United States, 1800 to 1913," in *Statistical Abstract of the United States*, 1913. Where possible, five-year averages have been used with the census year as the center.

but man is far more productive, and even as a slave sold for more than the lower animals.

Man can get but little directly from nature with his unaided hands. The instruments which assist him, as we have seen, are called *capital;* in other words, *capital is every product which is used or held for the purpose of producing or acquiring wealth.* By this definition, land is evidently excluded from the category. The nation's capital, then, consists of tools, machinery, business buildings, transportation systems, raw material, etc.[1] Capital cannot be looked upon as an independent factor of production, since it is derived from the labor of man applied to nature. This fact has led some persons to say that capital is simply stored-up labor, but this overlooks the important element of time required for production with the aid of capital. When we say that to print a book according to present-day methods requires the coöperation of labor and capital, we do not deny that the type-setting machines and printing presses which are used are themselves the product of other kinds of labor applied to nature. To substitute capital for labor may seem to be simply substituting one kind of labor for another. But a long time elapses between the digging of the iron ore and the actual using of the machines in printing, and this means waiting for results on the part of some one. Capitalistic production, as distinct from simple hand labor, is merely a different method — a roundabout method — of applying human labor to the materials of nature. It is this time element which gives rise to the problem of interest to be discussed in a later chapter.

"Capital is an intermediate product of nature and labor, nothing more. Its own origin, its existence, its subsequent action, are nothing but stages in the continuous working of the true elements, nature and labor. They, and they alone, do everything from beginning to end in bringing consumption goods into existence. The only distinction is that sometimes they do it all at once, sometimes by several stages. In the latter case the completion of each stage is marked outwardly by the appearance of a fore-product or intermediate product, and capital has emerged. But, let me ask, is a thing any

[1] We may here again caution the reader against confusing these concrete goods with their *value.* A factory building might sell for $100,000, but the capital is the building itself, not its money value.

the less the work of its author that it is not produced all at once, but in installments? If today, by allying my labor with natural powers, I make bricks out of clay, and tomorrow, by allying my labor with natural gifts, I obtain lime, and the day after make mortar and so construct a wall, can it be said of any part of the wall that I and the natural powers have *not* made it? Again, before a lengthy piece of work, such as the building of a house, is quite finished, it must naturally be at one time a fourth finished, then a half finished, then three quarters finished. What, now, would be said if one were to describe these inevitable stages of the work as independent requisites of house-building, and maintain that, for the building of a house, we require, besides building materials and labor, a quarter-finished house, a half-finished house, a three-quarters finished house? In form perhaps it is less striking, but in effect it is not a whit more correct, to elevate those intermediate steps in the progress of the work, which outwardly take the shape of capital, into an independent agent of production by the side of nature and labor." [1]

For some purposes it is important to distinguish *fixed capital*, which lasts for a succession of operations, from *circulating capital*, which is used up in one act of production. Coal used in a locomotive is an example of circulating capital; the car in which the coal is hauled is fixed capital. The difference is one of degree only.[2]

Saving and Capital Formation. — From the individual standpoint, saving means the postponement of consumption. To lend to another, and thus secure a claim on his services for the future, is an act of individual saving, but this does not necessarily result in saving from the social standpoint. An act can be termed social saving only when the total social income in the future will be increased thereby. It is conceivable that this might take the form of merely hoarding up finished consumption goods in anticipation of a famine, but that is not the kind of saving that is typical of modern industrial nations. It is true,

[1] Böhm-Bawerk, *Positive Theory of Capital* (trans. by W. Smart), p. 96.

[2] The difference between fixed and circulating capital has to be recognized in the accounting systems of business undertakings. Since the unit of time for which accounting attempts to state costs and profits accurately is usually a year, items of capital which are ordinarily acquired and disposed of ("turned over") within a year are called "current assets," while items of capital whose period of normal use is more than a year are called "capital assets." Both kinds of assets are, of course, capital in the economic sense, except that land is always included in "capital assets."

however, that we frequently produce durable consumption goods which will be used for a long time in the future. The construction of a public library building thus involves real social saving.

But true social saving may also take the form of bettering the industrial equipment of society. To provide more and better machines it is necessary to use some of the labor which might be used to increase our present income. If all of the labor now used in the construction of new milling machinery, ovens, etc., were employed in turning into bread all of the flour we now have on hand, we could doubtless greatly increase temporarily our present income in bread, but it would be at the expense of the future income. Thus the saving which results in the formation of social capital requires two things: (1) abstaining from the largest possible income today, and (2) using part of our labor in bettering the industrial equipment.

Organization of the Productive Factors. — The three factors, land, labor, and capital, must be brought together for purposes of production. In the case of many farmers and small-scale manufacturers, all three are furnished by the same person, but under our system of private property, a marked differentiation of ownership takes place as industrial development becomes more complex. In a large-scale establishment it is the exceptional case where the majority of the laborers have any share in the ownership of the capital, but generally the owners of the capital are also the owners of the land. In American agriculture, ownership of the land and the capital by the same person is also common, but in England at the present time it is the rule that the landowner and farmer are different persons. On the other hand, factories are frequently built upon leased ground, and much land is farmed in America by tenants who furnish their own capital. Separation in the ownership of the productive factors makes necessary a distinct valuation of the services of each one of the factors.

The Entrepreneur, or Undertaker. — The one who manages a business for himself was formerly called an undertaker, or adventurer, but the first word has been appropriated by one small

class of business men, and the latter has acquired a new meaning, carrying with it the implication of rashness and even dishonesty. We have consequently been obliged to resort to the French language for a word to designate the person who organizes and directs the productive factors, and we call such a one an entrepreneur. The entrepreneur also assumes a large measure of business risks and uncertainties.

The function of the entrepreneur has become such an important one in modern society that it is often convenient to regard him as a fourth factor in production, distinct from other classes of laborers. He has been well called a captain of industry, for he commands the industrial forces, and upon him more than any one else rests the responsibility of success or failure. A business which has achieved magnificent success often becomes bankrupt when, owing to death or other causes, an unfortunate change in the entrepreneur is made. The prosperity of an entire town has sometimes been observed to depend upon half a dozen shrewd captains of industry.

Division of Labor. — A characteristic feature of the organization of the factors is what is commonly called a division of labor, but this term suggests a number of related ideas which must be distinguished. (1) We may mention first a separation of *occupations*, each one being independent of the other, as is shown, for example, in the splitting up of medical work into various specialties, and again, entirely new occupations are continually appearing. (2) We also find production divided into *stages*, each one giving rise to a commercial product, but not to a finished consumption good. This becomes clear if we think of the history of almost any article of daily use: the making of bread presupposes the flour and wheat stages. (3) We have in the third place what is most commonly referred to by the term "division of labor," where *the productive process is divided into minute parts*, and one part given to each laborer. The organization of a cotton mill affords an excellent illustration:

> In cotton mills, as in all other textile mills, there are men of skill and experience who superintend or oversee the work in various buildings and in the rooms and yards. These supervisory employees have assistants, and

the division of superintendence is carried down to the sections of rooms, so that all sections have their supervisors, known variously as section bosses, section hands, section girls, and third hands. The following list of occupations will indicate the extent to which division of labor is carried in this industry: alley boys (or girls); bundle boys; filling and roving carriers; belt makers, blacksmiths, carpenters, machinists, masons, painters, steam fitters, and other mechanics, including sometimes electricians and batterymen; roll coverers; helpers; laborers (unskilled); bale openers; picker hands or cotton shakers; lap tenders; card brushers; first and second breaker hands; finisher pickers; card boys; card hands; waste hands; wastemen; card clothiers; card strippers; card grinders; combers; lap-head hands; doublers; drawing-frame tenders; railway-head tenders; slubbers; speeders, fly-frame tenders; jack tenders; rovers; spinners; bobbin boys; yarn pourers; piecer and doffer; back boy; band boys; doublers and twisters; winders; yarn untanglers; spool boys, white spoolers; warpers; slasher tenders; size makers; reel hands; dye-house hands (with further subdivisions); beamers and splitters; beam carriers; warp drawers; harness menders; harness brushers; handers-in; twisters-in; loom fixer; pattern makers; putters-up of samples; cloth weavers; weavers of designs; yarn carriers; smash piecers; spare weavers; inspectors; trimmers. The finishing of the cloth is a separate industry.[1]

This form of the divison of labor may also exist without the use of complex machinery, as in the slaughtering and meat-packing industry.

"It would be difficult to find another industry where division of labor has been so ingeniously and microscopically worked out. The animal has been surveyed and laid off like a map; and the men have been classified in over thirty specialties and twenty rates of pay from 16 cents to 50 cents an hour. The 50-cent man is restricted to using the knife on the most delicate parts of the hide (floorman) or to using the ax in splitting the backbone (splitter); and wherever a less skilled man can be slipped in at 18 cents, 18½ cents, 20 cents, 21 cents, 22½ cents, 24 cents, 25 cents, and so on, a place is made for him and an occupation mapped out. In working on the hide alone there are nine positions at eight different rates of pay. A 20-cent man pulls off the tail, a 22½ cent man pounds off another part where the hide separates readily, and the knife of the 40-cent man cuts a different texture and has a different 'feel' from that of the 50-cent man. Skill has become specialized to fit the anatomy." [2]

[1] From the Glossary of Occupations in the volume on *Employees and Wages*. Twelfth Census, Special Reports, 1903.

[2] Commons, *Trade Unionism and Labor Problems*, p. 224, in a chapter appearing originally in the *Quarterly Journal of Economics*, vol. xix, p. 1.

Advantages of Division of Labor. — The advantages of a division of labor have been enumerated as follows: (1) A gain of time. A change of operations costs time. Less time is also consumed in learning one's business, as the labor of each is more simple. (2) Greater skill is acquired, because each person confines himself to one operation. (3) Labor is used more advantageously. Some parts of an industrial process can be performed by a weak person, others require unusual physical strength; some require extraordinary intelligence, some can be performed by a man of very ordinary intellectual powers. Special capacities are best utilized, and work is found for all, young and old, weak and strong, stupid and intelligent. (4) Inventions are more frequent, because the industrial processes are so divided that it is easy to see just where an improvement is possible. Besides this, when a person is exclusively engaged in one simple operation, he often sees how the appliances he uses could be improved. Workmen have made many important inventions. (5) Capital is better utilized. Each workman uses one set of tools, or one part of a set, and keeps that employed all the time. When each workman does many things, he has many tools, and some are always idle. (6) Finally, where the division of labor results in the simplification of operations, it facilitates the substitution of machinery with mechanical power in place of direct human labor. It would, for example, probably be impracticable to make a machine which would directly convert leather into finished shoes. But it has been found a relatively simple matter to devise machines which will successfully accomplish each of the successive steps in shoe-making. Such a subdivision and simplification of manufacturing processes is only possible when they are conducted on a large scale. "It is the largeness of markets, the increased demand for great numbers of things of the same kind, and in some cases of things made with great accuracy, that leads to subdivision of labor; the chief effect of the improvement of machinery is to cheapen and make more accurate the work which would anyhow have been subdivided." [1]

[1] Marshall, *Principles of Economics*, 6th ed., p. 255.

Effects upon the Worker. — The effect of the introduction of machinery upon wages will be discussed in a later chapter, but here some attention must be given to the effect of division of labor and machinery upon the life of the worker. It is frequently said that when labor is rendered simple it loses both its attractiveness and its educational value. A man can enjoy his work when he manufactures a whole watch, bearing the impress of care and skill, but who can like the mere routine of feeding material into some machine? A workingman becomes a mere cog in a great mechanism, driven at a certain speed, day after day, with no further interest in the result of his labor than that it is the source of his daily wage. But much may be said on the other side. To a large extent the heaviest labor is done with mechanical appliances, and those movements which are very simple and regular are precisely the ones which are likely to be taken over by machinery, leaving to human beings the work which requires intelligence and skill.

"Looked at broadly, is the average work of a laborer in a machine industry less dignified, less agreeable, less humanizing than it was before the industry reached the machine stage? From the nature of the question, it is dangerous to dogmatize, because neither the affirmative nor the negative is capable of being demonstrated. The negative view seems to rest mainly upon the assumption that it is more dignified to be occupied with a great many purely mechanical operations than with a very few. The old-fashioned shoemaker, for example, was largely occupied with purely mechanical operations, most of them of a very elementary nature, such as a machine can do quite as well as a man. Each of these operations required great concentration of attention, leaving him very little opportunity for other forms of mental activity. He was the slave of each particular task as truly as a modern machine worker can be said to be the slave of his single task. But the old-fashioned shoemaker had to turn from one kind of work to another. This increased the difficulty, and, on the whole, required of him a greater amount of concentration than is now required of the operator of a machine. The latter, who has but one routine task to learn, learns it easily, and can carry it out without very intense concentration of mind. His mind, therefore, would seem to be freer than that of the old hand worker, though there was more variety to the work of the latter. Whether this greater variety is to his advantage or disadvantage would be difficult to determine offhand. It looks as though the operator of a machine in a shoe factory, being relieved of the necessity of acquiring several forms of specialized

manual dexterity, would be in a better position for free mental activity than the old-fashioned shoemaker." [1]

It seems that those who declaim against factory life do not always distinguish those things which are temporary from things which are inherent in the system. Long hours, insanitary conditions of work, and frequent industrial accidents need not be inevitable accompaniments of the use of machinery. It is the efficiency of machine methods that makes leisure possible for the workingmen, and when they learn to use that leisure sanely, their condition will be far in advance of what it could be under more primitive methods of production.

The charge is also brought against machine production that it is antagonistic to the development of art. Machine production means uniform production. It is possible that a growth in the desire for what is beautiful rather than cheap will limit the use of machinery in some directions (*e.g.* we may insist upon more hand work in the making of furniture), but an extensive use of machinery as a servant of art will always be necessary, and that in two ways: (1) For an appreciation of art there must be leisure, or at least leisurely work, and without machine methods this is not possible for the masses. (2) There is much work that is preliminary to the work of the artist, and that can be done by machinery. Will a building be less artistic because much of the heavy work of dressing the stone is done by machinery? Taken as a whole, however, we have probably been too much inclined to view progress as something that causes tons per capita to increase by leaps and bounds, rather than as something that improves the quality of our enjoyments.

Territorial Division of Labor. — The concentration of a certain industry in a particular region is often called the territorial division of labor, or the localization of industry. Illustrations are seen in the prominence of the boot and shoe industry in Massachusetts; the collar and cuff manufacture in Troy, New York; oyster canning in Baltimore; the manufacture of gloves in Gloversville and Johnstown, New York; of coke in the Con-

[1] T. N. Carver, "Machinery and the Laborers," *Quarterly Journal of Economics*, vol. xxii, p. 230.

nellsville district, Pennsylvania; of brassware in Waterbury, Connecticut; of carpets in Philadelphia; of jewelry in Providence, Rhode Island, and Attleboro and North Attleboro, Massachusetts; slaughtering and meat packing in Chicago; the manufacture of plated and britannia ware in Meriden, Connecticut; and of silk in Paterson, New Jersey. The following causes of localization have been mentioned: (1) proximity to raw material, (2) accessibility of markets, (3) presence of water power, (4) favorable climate, (5) availability of labor, (6) availability of capital, and (7) the momentum of an early start. The explanation of how these causes have operated in particular instances is left as an exercise for the student.[1]

Productive Organization of the American People. — According to the Census of 1910 about two fifths of the total population and about one half of the population ten years of age and over are engaged in gainful occupations. In the following table the extent to which persons in each age group are gainfully employed is shown for each sex:

TABLE I

NUMBER AND PERCENTAGE ENGAGED IN GAINFUL OCCUPATIONS FOR SPECIFIED AGE GROUPS OF MALES AND FEMALES: 1910[2]

Age	Males of Specified Age			Females of Specified Age		
	Number	Engaged in Gainful Occupations		Number	Engaged in Gainful Occupations	
		Number	Per Cent		Number	Per Cent
10–13 years	3,665,779	609,030	16.6	3,593,239	286,946	8.0
14–15 years	1,798,449	744,109	41.4	1,770,898	350,140	19.8
16–20 years	4,564,179	3,615,623	79.2	4,632,821	1,847,600	39.9
21–44 years[3]	17,848,843	17,262,209	96.7	16,331,449	4,302,969	26.3
45 years and over	9,149,308	7,860,593	85.9	8,224,305	1,288,117	15.7
10 years and over	37,027,559	30,091,564	81.3	34,552,712	8,075,772	23.4

[1] Consult Hall, "The Localization of Industry," *Census Bulletin* No. 244 (also found in Twelfth Census, *Manufactures*, Part i, p. cxc), and Ross, "The Localization of Industry," *Quarterly Journal of Economics*, vol. x, p. 247. Also the Federal Census of *Manufactures* for 1905, vol. i, Chap. xii.

[2] Thirteenth Census, vol. iv, p. 69. [3] Includes persons of unknown age.

The following table shows the distribution of the gainful workers among the five main classes of occupations. The most striking facts are the decline in the relative importance of agricultural pursuits and the increase in the relative importance of trade and transportation.

TABLE II

DISTRIBUTION BY MAIN CLASSES OF PERSONS ENGAGED IN GAINFUL OCCUPATIONS

CLASS OF OCCUPATION	1910	1900	1890	1880
Agricultural pursuits	32.9	35.7	39.2	44.3
Professional service	4.8	4.3	4.0	3.5
Domestic and personal service	14.0	19.2	18.1	19.6
Trade and transportation	19.9	16.4	14.3	10.8
Manufacturing and mechanical pursuits	28.3	24.4	24.4	21.8
All occupations	100.0	100.0	100.0	100.0

The broad territorial division of labor is seen when these percentages are given separately for groups of states:

TABLE III

PERCENTAGE DISTRIBUTION OF PERSONS 10 YEARS OF AGE AND OVER ENGAGED IN GAINFUL OCCUPATIONS, BY GEOGRAPHIC DIVISIONS: 1910[1]

DIVISION	AGRICULTURE	MINING	MANUFACTURING	TRANSPORTATION	TRADE	PUBLIC SERVICE (not elsewhere classified)	PROFESSIONS	DOMESTIC AND PERSONAL SERVICE	CLERICAL OCCUPATIONS
New England	10.4	0.3	49.1	6.5	10.6	1.7	4.8	10.7	5.9
Middle Atlantic	10.0	4.2	40.6	8.0	12.0	1.4	4.9	11.8	7.1
East North Central	25.6	2.6	33.2	7.6	10.6	1.1	4.8	9.2	5.3
West North Central	41.2	1.8	20.0	7.8	10.4	1.1	5.2	8.5	3.9
South Atlantic	51.4	1.8	18.6	5.0	6.1	1.0	3.0	10.5	2.6
East South Central	63.2	1.9	12.4	4.0	5.3	0.6	2.6	8.4	1.7
West South Central	60.1	0.7	12.6	5.2	7.0	0.8	3.3	8.1	2.1
Mountain	32.4	9.4	19.5	10.3	8.7	1.7	5.2	9.1	3.6
Pacific	22.6	2.4	27.2	10.3	12.6	2.0	6.0	11.3	5.5
United States	33.2	2.5	27.9	6.9	9.5	1.2	4.4	9.9	4.6

[1] Thirteenth Census, vol. iv, p. 45.

QUESTIONS

1. Is the employee in a planing mill in a worse position than the old-time carpenter who has to do his planing by hand?
2. Is the keeper of a gambling establishment a producer of wealth?
3. Is an insurance agent a producer of wealth?
4. What would happen if there should be too much saving?
5. Why is Massachusetts the center of the boot and shoe industry?
6. Write a survey of national resources and production in the United States from data in the Statistical Abstract of the United States.

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CHAPTER IX

CONSUMPTION

Consumption Defined. — Consumption means, in economics, *the use of goods in the satisfaction of human wants*, directly or indirectly. It is the chief incentive to economic activity, but it is not the sole incentive, for such activity is to a certain extent an end in itself. Nevertheless, in economic society as it is organized to-day we are justified in looking upon the consumption of material goods in the satisfaction of human wants as the essential motive and purpose of the production of such goods. Wants are so far from satisfied that most men must work, not because of the pleasure they may derive from the exercise of their capacities, or to utilize fully their natural energies of brain or muscle, but because they need or crave the goods which their wages will buy. Regarded as an incentive to economic activity, consumption should, of course, be defined so as to include the use made of direct personal services as well as of material goods.

The philosophy of the consumption of wealth falls only partly within the domain of economics, for the use of wealth is a large part of the problem of life. Passing judgment on the rational standards according to which the true importance of different wants should be measured does not directly concern us in the study of economics.

Productive and Final Consumption. — When used without qualification, the word " consumption " in economics is commonly taken to refer to the use of goods or services to satisfy wants directly. But some goods, such as machines and raw materials, are used up in the production of other goods. This we may call *productive consumption*, while that consumption which results directly in the satisfaction of wants is *final consumption*. It is now less necessary than it was in the days of

Carlyle and Ruskin to insist that food consumed by laborers is not productive consumption. It is true that some analogy lies between the consumption of fuel by an engine and the consumption of food by a worker, but there is the very important difference, that the engine is specifically adapted to render economic service and cannot be conceived to derive any benefit whatever from its consumption of fuel, while in the case of the worker the consumption of food is determined with primary reference to his natural appetites and individual welfare. Man is our final term.

Human Wants. — In the study of human wants as a starting point in economic theory, two facts stand out prominently: the *expansion in the number and variety of wants*, and the *satiability of any particular one of them.* As man has progressed from savagery to civilization, the variety of things he desires and even considers necessary to his existence has expanded enormously. His interests become more varied, his capacity to enjoy becomes larger, and he lives a fuller and more complex existence. There are indeed those who would have us "return to nature" and live a simple life, but taking the world as it is, the expansion of human desires with passing time appears to be without limit.

But when we turn to consider some specific want by itself, as it is at any particular time, the matter is different. Our nerves weary of a repeated stimulus, and any attempt to continue indefinitely the enjoyment of some sensation results in satiation. A phonograph record grows stale after a number of repetitions. An apple has differing degrees of utility for any one of us, varying from the highest degree, if we are on the point of starvation, to disgust, if a considerable number have just been consumed.

Law of Diminishing Utility. — The fact that *the intensity of our desire for additional units of a commodity decreases as we acquire successive units* is of fundamental importance in economic science. And this "law of diminishing utility," as it is called, rests upon a broader basis of human experience than the mere satiability of the appetite for a particular kind of food, or the growing weariness of the nerves under the repetition of a particular stimulus. The truth is that most commodities serve a

multitude of different needs and different purposes, and that these needs and purposes vary greatly in their importance. It is better to have two suits of clothes than to have one, but it is by no means twice as important. And a third, or a fourth, or a tenth suit, are, in order, of rapidly decreasing importance. How large shall my building lot be? How many rooms shall I have in my house? How much electric current shall I use for lighting purposes? How many motor cars shall I own? How many servants shall I employ? Questions such as these at once suggest the way in which a certain minimum amount of a given commodity or of a given service may be deemed exceedingly important for our purposes, and how a diminishing importance is attached to successive additional portions or increments. So far as any one commodity is concerned it is in general less important to have *more* than to have *some*.

To guard against possible misunderstanding a word of caution is necessary at this point. With passing time the use of a particular commodity often cultivates a taste for it, so that an increased supply is more urgently desired than were the earlier increments. Thus familiarity with good books or good pictures or good music may increase the pleasure that we find in such things, and so may intensify our desire to have more. And bad habits, like good ones, are prone to " grow on us." Such, for example, is the case in the use of habit-forming drugs. But these facts do not contradict the law of diminishing utility. For that law relates only to the consumer as he is at any given time, with whatever possessions, habits, desires, and aversions are his at that time. Men change and their wants change, and the character of a man's consumption is, of course, a very important factor in changing his wants. But just now we are considering men as potential buyers of more goods or sellers of surplus goods *in a given market at a given time*, and for men so considered the law of diminishing utility expresses a fundamental truth of very great significance.

A thoughtful reader may object that in view of the considerations urged in the preceding paragraph such illustrations as that of the satiety resulting from eating a number of apples are not exactly to the point, for when the

hungry eater of apples becomes a satiated eater of apples, he is, in that respect, a "changed person." It is true that some expositions of the principle of diminishing utility attach altogether too much importance to what have been called "dinner-table illustrations." But the real point in the matter is that the satiation of the appetite is a familiar fact of experience, which has an important bearing upon the character of our wants as they manifest themselves *at any one time*. If I am hungry, but have six apples, I will give less for another apple than if I had only one.

Marginal Utility. — It must be evident, therefore, that to say that a certain thing possesses utility is very indefinite. That merely tells us that it is capable of satisfying some want, perhaps important, perhaps unimportant. And, furthermore, one may use some units of a commodity in the satisfaction of very important wants, and other units of the same commodity in the satisfaction of relatively unimportant wants. This amounts to saying that for any one person different units of the same commodity may possess very different degrees of utility. *The utility of the final or marginal unit of a person's stock of a given commodity is called the marginal utility of that commodity to that person.* If, for example, a boy has six apples, the marginal utility of apples to him is simply the utility (or want-satisfying capacity) of the sixth apple. This does not mean the utility of any particular apple, but does mean (if the apples are all alike) the utility dependent on the possession of any one apple of his stock of six. This will be less than if he had fewer apples, and more than if he had a larger number. So with a householder who has a stock of ten tons of coal for his winter's supply. The tenth ton (any one ton of the ten) is the marginal ton; and the utility it adds is the marginal utility of coal to the householder. Marginal utility thus depends upon the intensity of the want dependent for its satisfaction upon the possession of one unit of a commodity. The larger one's supply of a commodity, the smaller in general will be the importance one attaches to the possession of any one unit of the supply.

Some writers prefer to define marginal utility as the utility of an *additional* unit of a commodity rather than as the utility of the last unit of one's present stock. In some applications of economic analysis it is convenient to think of the successive units or increments in the supply of a commodity

as indefinitely small. In this case the difference beween the "last unit" and an "additional" unit becomes negligible. But for many purposes it is more convenient to think of the size of our successive increments as being that of the ordinary units in which goods are customarily bought and sold. In such cases whether the "last unit" or the "additional unit" should be considered the marginal unit depends upon whether we think of the individual concerned as a possible seller or a possible buyer. If the boy with the apples is weighing the desirability of having yet another apple against that of some peanuts he would have to part with in exchange for it, the marginal utility of apples to him may properly be said to be the utility of the additional apple, for this is the basis of its subjective importance for the purpose in hand. But if he is contemplating the exchange of an apple for additional peanuts the marginal utility of apples to him depends upon the importance of the sixth apple. It is always accurate to identify marginal utility with the utility of the last unit of a stock, if we remember that in some cases it is the last unit of an existing stock and in other cases the last unit of a (possibly) increased stock.

Marginal Utility Illustrated. — A clearer notion of marginal utility may be given with the help of Figure 1, following. We take for our illustration the consumption of water, which has numerous uses of various degrees of importance. We have marked off different portions of the base line representing quantities of water available for man's use. The first quantity, *ab*, is just enough for drinking purposes. Suppose this is all the water to be had. There will be no question of sprinkling lawns or even of bathing under such circumstances. What will be the utility of water? Evidently the extent of the service which it renders us, and as this is the preservation of our life we cannot estimate it. We will indicate it by the area above the line *ab* which runs upward indefinitely as the curved line fails to close in. What will be the importance of another portion of water at this point of supply? As this additional portion which we

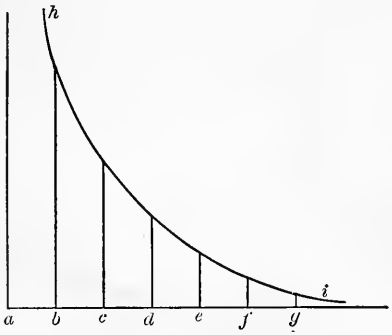

FIG. 1

desire is not needed for drinking but for a less important purpose, the marginal utility of the water will now depend upon the urgency of this less-important want. Now suppose we have three portions of water, represented by the lines *ab*, *bc*, and *cd*. We now have enough for all our wants, down to sprinkling the lawn and the street. We are willing to pay something for more water for this purpose, but how much? As much as when we had only water enough to drink? By no means. The next want on our list is comparatively unimportant, and of course we appraise an increased supply accordingly. With two or three more portions of water all our wants are satisfied, and the marginal utility of water will have become zero. As the amount of water is increased, the utility falls according to the curved line *hi*, till finally it touches the base line, where the marginal utility of the water vanishes.

Subjective Value. — As we proceed in our study we shall see that the most important problem of economics is that of ascertaining the laws which determine the *prices* of different goods and services. To some goods and some services more importance is attached than to others, and larger quantities of the less important goods and services can be obtained in exchange for smaller quantities of the more important goods and services. This is a matter of prime significance, since it determines the way in which the different persons who contribute goods and services to the aggregate wealth-product of the community will be able to secure shares in it.

We are not yet ready to attack the general problems of value, but we can take an important step forward at this point by grasping the meaning of *subjective value*.

The subjective value of a good is not, of course, a definitely measurable objective quality of the good, like weight or extension. It is, as the word " subjective " implies, purely psychological, and may be different for different persons. It is, moreover, purely *relative*. The subjective valuation of things always implies the choosing of some things rather than others. In other words, it involves a determination of their comparative

importance for one's own purposes. More formally stated, *the subjective value of a good to any person is that person's estimate of the importance of possessing that good as compared with the importance of possessing other goods.*

But we do not value things in the abstract, or in indefinite quantities. In buying coal or sugar or oranges we do not have to confront the alternatives of either doing entirely without such commodities or acquiring an indefinitely large supply. If we decide to buy at all, we may buy as little as we please. Our choices, in practice, resolve themselves into questions of *more or less.* Even in the case of an indivisible good — an automobile, for example — one may choose between having more or less of certain desirable qualities, such as size, or power, or attractive finish. And it is evident that whether the importance that we attach to the possession of an additional unit of a certain good is greater or less than the importance that we attach to an additional unit of some other good will depend, very largely, upon the extent to which our wants for each of the goods in question are satisfied without the possession of the additional unit. Put in other words, the question is: Which good has the higher marginal utility?

Subjective value, then, involves a balancing or comparison of marginal utilities. In fact, we may say that *the subjective value of a good is the expression of its relative marginal utility.* In this statement the word *relative* is used in order to emphasize the element of comparison or choice.

The Subjective Value of a Stock of Goods. — It should be carefully noted that marginal utility tells us nothing about the total subjective value of one's whole stock of the commodity. It refers solely to the present value of an additional unit, or the sacrifice that would be occasioned by the loss of a unit. We cannot get the total subjective value of a stock of goods by multiplying the marginal utility by the number of units, even though they be all alike. The very term " marginal " tells us that the conception implies successive additions, and the present importance of one unit tells us nothing definite about the importance of the other units. If we wish to ascertain the total

subjective value of a stock of a commodity, we have simply to treat it as one large unit, and ask what would be lost if it were taken away. By this test all air would be found to have an immeasurable utility, at the same time that the subjective value of an additional cubic foot would be nothing. Thus it will be seen that the cause of subjective value is utility under a condition of scarcity; that is, such a limitation of the supply that not all wants can be satisfied.

The Economic Order of Consumption. — What has been said regarding the way in which our individual estimates of the importance of a commodity are determined will help to explain how we make our choices in attempting to obtain the largest

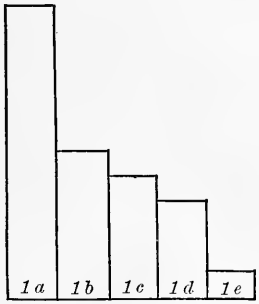

FIG. 2

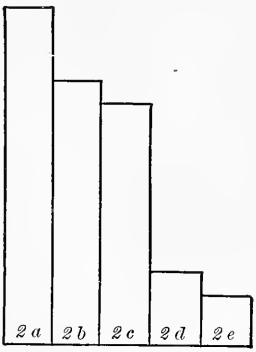

FIG. 3

amount of satisfaction with the income at our disposal. Evidently we must spend each succeeding dollar for purchasing that commodity of which a dollar's worth will give the greatest satisfaction. Let Figures 2 and 3 show the declining importance of two commodities which an individual is consuming, and suppose that each unit of each commodity costs one dollar. If the individual has ten dollars to spend upon these two commodities, his order of consumption will be as follows: he would begin with *2a*, but another unit of commodity 2 would give him less satisfaction than a unit of commodity 1. Hence, his consumption will continue as follows:

1a, *2b*, *2c*, *1b*, *1c*, *1d*, *2d*, *2e*, *1e*.

In this illustration it was assumed that a unit of each commodity had the same cost. In this case, the unit consumed is always the one that has the largest utility. But where the cost of the units is different, cost must be considered also, and we commonly do so by asking ourselves whether the thing we are buying is worth as much as other things which could be obtained with the same expenditure. Thus we are constantly abstaining from the further consumption of one thing, not because our wants for it are fully satisfied, but because something else of equal cost appears at that moment to be more important.

Future Wants. — Not all of the goods for which we strive are wanted for present consumption. We recognize that we shall

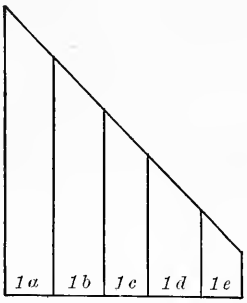

FIG. 4

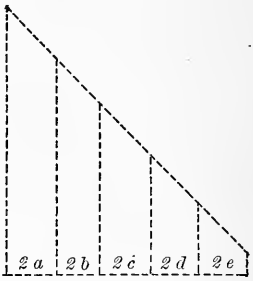

FIG. 5

have needs next month or next year, and we attempt to make some preparation for them. These future needs, it is true, usually appeal to us less vividly than if they were present, but we attach a present importance to them and grade them, and they enter into our calculations when we spend money, modifying the order of our consumption. This will be seen from Figures 4 and 5. Let us suppose that in Figure 4, *a*, *b*, *c*, *d*, *e* represent the diminishing importance of successive units of a commodity for present consumption, and that Figure 5 shows the present importance attached to the future consumption of similar units. Then an individual would consume 1*a*, *i.e.* in the present. But a second unit for present use would rank lower in present esteem than a unit saved for future use. The unit 2*a* would

then be saved, and then the order would be as follows: 1*b*, 2*b*, 1*c*, etc. Thus this individual has saved two out of five units, *i.e.* 2*a* and 2*b*, with the same sort of mental calculation as he would use in deciding to spend a nickel for a peach rather than for a pear. But if some one should ask him to spend his fifth dollar for 2*c* instead of for 1*c*, he would require some extra inducement to induce him to postpone at ruling prices. It thus appears that a certain amount of saving is done without payment, but if saving is to be carried beyond a certain point, it must be given some special premium or compensation. This, as we shall see later, has a very important bearing upon the problem of *interest*.

The Margin of Consumption. — Either by a conscious balancing against each other of the pleasures to be obtained from two or more possible purchases, or oftener, by simply buying the things which we want more than we want other things, we tend to keep our unsatisfied wants in a state of approximately equal intensity. We apportion our expenditures so that our money will "go as far as possible"; that is, so that it will provide those things that have the strongest present appeal to us. Every person thus has a *margin of consumption*, which is measured by the utility obtained in return for the final or marginal dollar expended for any one of the things that he consumes. If he unwisely expends too much for any one thing, his more important unsatisfied wants for other things press upon him urgently, and he is apt to try to restore the balance or equilibrium in his expenditures, or, in other words, to bring his margin of consumption into alignment.

An individual's margin of consumption depends primarily on his income, but also on his tastes and habits, his disposition to save, and the relative emphasis which he places upon his present and his future wants. Then, too, one's desires are constantly changing under the influence of whim, fashion, satiety, sellers' advertising, education, travel, reading, and new experiences of all kinds. Expenditures of all kinds are thus called into being by the necessity of maintaining the level of the margin of consumption.

The margin of consumption is different for different persons. This is partly a matter of differences in individual tastes and purposes, but it is more largely a matter of differences in incomes. The larger one's income, the lower, of course, is one's margin of consumption, in the sense that one is able to acquire goods in larger quantities and thus to satisfy wants of less urgency. And, of course, a larger variety of commodities can be consumed, so that as one's income increases one's margin of consumption is normally extended downward and outward, including more things, but things of less importance.

Consumption and Saving. — It is difficult to say just where consumption should stop and saving begin, to secure the best results for society as a whole, but the principle is clear. So much, and only so much, should be saved as will conduce to a maximum total service over long periods of time. The present generation might deny itself everything except the barest necessities, and labor to increase the productive equipment to be used in the future; but the next generation could not pursue the same policy, for some one must consume the products of the factories built today, otherwise the building of them is wasted effort.

Alleged Present Consumption of Future Products. — We often hear of consumption in advance of production. It is said people live on the future. It is frequently argued that during the American Civil War we were consuming faster than we were producing. It is alleged that the government borrowings at that time represented the consumption of future earnings. But it must be apparent that it is impossible to consume faster than we produce unless we consume past savings by not replacing worn-out equipment, or by failing to maintain the customary stocks of goods, or unless we borrow from other nations. We cannot eat today the wheat or potatoes of tomorrow, nor can we wear coats before they are made. What is alleged can never be true except of the individual consumer within the nation, or of the nation as a whole when the capital or other wealth of the country is diminishing, or when its foreign debt is increasing. What really happened at the time of the Civil War was this: we as a nation became indebted to some extent to foreigners, and within the nation some of us gained while the rest were losing. Government borrowings do not represent a present consumption of future wealth, but a special present use of purchasing power for which a government agrees to remunerate its owners in the future. If war can be carried on with the aid of borrowings, it can, — leaving out of consideration what foreigners send, — with a sufficiently perfect taxing machinery, conceivably always and practically sometimes, be carried on without borrowing. It is only a question of how to get hold of the means of producing powder and bullets and the

necessaries of life. War was formerly carried on without bond issues; they are a comparatively recent contrivance. Consumption can never anticipate future production for the nation as a whole taken by itself; it can only anticipate future ownership.

Luxury. — Luxury is the name of a vague something which society has always viewed with a sense of mingled tolerance and condemnation. What is its meaning? In the first place, it is clear that people ordinarily consider as luxuries many things in themselves innocent and desirable, as handsome dresses, jewels, pictures, etc. No one but an ascetic will condemn as wrong in themselves things that appeal to taste and finer appreciations, and yet we feel that the use of such things is not always justifiable. Second, the popular idea of luxury recognizes a difference in persons. We cannot help condemning in one person what we approve in another. Third, we judge luxury differently at different times. There is a continual transfer of articles from the list of luxuries into that of comforts and necessities. This transfer is brought about by the consensus of social judgment, and is increasingly acquiesced in by all. So we see that the term " luxury " does not apply to goods of a certain character, but to certain goods in their relation of time and person. For the purpose of discussion, we shall define luxury simply as excessive personal consumption.

Our definition of luxury as excessive consumption necessarily condemns it as unjustifiable, but this should not be taken as a condemnation of an enjoyment of more than the simplest kind of life. There would be little purpose in producing wealth in larger and larger volume if it did not mean a higher and better standard of life. But this meaning does not justify the squandering of immense sums on passing caprices whose satisfaction cannot be justified from the standpoint of what is a sane life. Nor does it constitute a defense of ostentatious expenditure. Extravagant expenditure is sometimes condoned on the ground that it gives employment to labor, but obviously just as much employment would be given to labor by an equivalent expenditure for laudable purposes. Expenditures for any present gratification can be made only by reducing the

amount either of other expenditures or of savings. Rarely in these days are savings hoarded : they are used for gainful, often for socially productive, purposes. Extravagant expenditures, therefore, may divert productive agencies into employments less beneficial to society. Moreover, to look upon expenditure as desirable because it gives employment to labor, or " puts money in circulation " and " makes trade good," is to forget that, ethically viewed, production is justified only through the satisfaction of human wants, and so far as the wants satisfied are trivial or worse the necessary productive effort is virtually wasted.

Harmful Consumption. — We have been careful to avoid the impression that luxury consists in the use of pernicious goods. It is a common query, " Why should I not have this if it does me no harm? " This we have tried to answer in the preceding paragraphs. A luxury may be a positive good in itself, a satisfaction which society may well hope to make general, but it is a good which society cannot yet afford, because other and greater wants are yet unsatisfied. But there is another kind of consumption which is objectionable in an entirely different way, not because it is excessive or premature, but because it is harmful in itself. Aside from the fact that such consumption usually tends to diminish the sum total of the durable satisfactions that the consumer gets out of life, it ordinarily lowers his productive efficiency, and this involves a further loss to himself, to any who may be dependent upon him, and to the whole community.

Statistics of Consumption. — Instructive investigations have been made as to the relative importance of the leading items in the family budget. The late Ernst Engel, the former distinguished head of the Prussian Statistical Bureau, advanced the theory that it might be possible by a careful study of a sufficient number of family budgets for a period of years to indicate the broad changes in consumption, and thus by a sort of social signal service to predict the coming of industrial storms. Nothing has been so far accomplished along this line, but Engel's tables are important in other ways. From Table I (page 145) he deduces the following four propositions :

1. The greater the income, the smaller the relative percentage of outlay for subsistence.

2. The percentage of outlay for clothing is approximately the same, whatever the income.

3. The percentage of outlay for lodging or rent, and for fuel and light, is invariably the same, whatever the income.

4. As the income increases in amount the percentage of outlay for sundries becomes greater.

TABLE I

ENGEL'S STATISTICS — SAXONY

ITEMS OF EXPENDITURE	PER CENT OF THE EXPENDITURE OF THE FAMILY OF		
	A Workingman with an Income of from $225 to $300 a year	A Man of the Middle Class with an Income of from $450 to $600 a year	A Man in Easy Circumstances with an Income of from $750 to $1000 a year
1. Subsistence	62.0	55.0	50.0
2. Clothing	16.0	18.0	18.0
3. Lodging	12.0	12.0	12.0
4. Heat and light	5.0	5.0	5.0
5. Education, public worship, etc.	2.0	3.5	5.5
6. Legal protection	1.0	2.0	3.0
7. Care of health	1.0	2.0	3.0
8. Comfort, mental and bodily recreation	1.0	2.5	3.5
Total	100.0	100.0	100.0
1–4	95.0	90.0	85.0
5–8	5.0	10.0	15.0

The reader will perceive that if Engel's table, published in 1857, had been constructed in recent years, somewhat different limits would have to be set for "middle class" incomes even in Germany.

Subsequent investigations in the United States have confirmed in a general way the conclusions of Engel, but the correspondence is not exact, as will be seen from Table II, from the reports of the United States Bureau of Labor, summarizing the expenditure of over two thousand families in 1891 and over eleven thousand in 1903.

Table III gives the results of a careful study of the budgets of 383 families in New York.

TABLE II

EXPENDITURES OF AMERICAN FAMILIES INVESTIGATED BY THE UNITED STATES BUREAU OF LABOR

(From the Seventh [1891] and Eighteenth [1903] Annual Reports)

INCOME GROUP	PER CENT OF TOTAL EXPENDITURE									
	Food		Clothing		Rent		Fuel and Light		Miscellaneous	
	1891	1903	1891	1903	1891	1903	1891	1903	1891	1903
Under $200	49.6	50.9	12.8	8.7	15.5	16.9	8.1	8.0	14.0	15.6
$200–300	44.3	47.3	14.3	8.7	14.7	18.0	7.6	7.2	19.2	18.8
$300–400	45.6	48.1	14.1	10.0	15.0	18.7	7.0	7.1	18.3	16.1
$400–500	45.1	46.9	14.4	11.4	15.3	18.6	6.6	6.7	18.6	16.5
$500–600	43.8	46.2	15.3	12.0	15.2	18.4	6.6	6.2	19.1	17.2
$600–700	41.2	43.5	15.9	12.9	15.5	18.5	5.9	5.8	21.6	19.4
$700–800	38.9	41.4	16.3	13.5	15.6	18.1	5.3	5.3	23.9	21.6
$800–900	38.1	41.4	15.1	13.6	16.1	17.1	5.3	5.0	25.5	23.0
$900–1000	34.3	39.9	16.8	14.4	14.9	17.6	4.7	5.0	29.1	23.2
$1000–1100	34.7	38.8	17.5	15.1	15.1	17.5	4.5	4.9	28.1	23.7
$1100–1200	30.7	37.7	16.5	14.9	12.2	16.6	3.9	4.7	36.7	26.1
$1200 or over	28.6	36.5	15.7	15.7	12.6	17.4	3.0	5.0	40.1	25.4
All	41.4	43.1	15.3	13.0	15.1	18.1	5.9	5.7	22.7	20.1

Consumption and Sacrifice. — Over against the enjoyment resulting from wealth consumption lies the discomfort of wealth production. Enjoyment, we have seen, grows less and less as the consumption of a particular good is continued, but the irksomeness of producing it, on the contrary, grows greater and greater the longer labor is continued. Let us take the case of Robinson Crusoe picking berries. We may represent the diminishing utility of the berries to him by the line *ab* (Fig. 1), and the increasing irksomeness of picking them by the line *cd*.

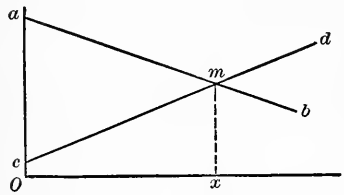

FIG. 1

TABLE III

EXPENDITURES OF FAMILIES IN NEW YORK CITY: 1907 [1]

INCOME GROUP	Number of Families	EXPENDITURES							
		Food	Clothing	Rent	Fuel and Light	Insurance	Health	Carfare	Sundries
		Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
$400–499	8	40.8	13.0	26.8	5.6	1.2	3.1	2.6	6.9
$500–599	17	44.4	12.4	25.9	5.9	1.3	1.9	1.8	6.4
$600–699	72	44.6	12.9	23.6	5.8	2.0	2.1	1.7	7.3
$700–799	79	45.6	13.4	21.9	5.0	2.5	1.9	1.5	8.2
$800–899	73	44.3	14.0	20.7	5.0	2.2	2.7	2.0	9.1
$900–999	63	44.7	14.6	19.0	5.1	2.6	2.6	1.5	9.9
$1000–1099	31	44.7	15.5	18.1	4.5	2.5	1.5	1.8	11.4
$1100–1199	18	45.6	14.9	16.2	3.8	2.5	3.6	1.9	11.5
$1200–1299	8	45.0	15.2	19.8	3.8	2.2	1.3	2.2	10.5
$1300–1399	8	43.6	13.7	16.8	3.6	4.9	1.1	1.1	15.2
$1500–1599	6	36.8	16.8	16.3	4.1	2.3	7.4	1.2	15.1

He would not pick more than Ox, because the xth berry costs him just as much pain as it yields him pleasure, and any further continuance of gathering fruit would result in an excess of pain. The degree of utility represented by mx, then, represents, at the moment that the xth berry is picked and eaten, both the marginal utility and the marginal disutility, or marginal pain or sacrifice.

Each of us has sometimes made such comparisons — balancing the pleasure of further consumption against the pain of further production. Many persons who are working eight or ten hours a day could increase their income somewhat by working twelve hours, but the additional discomfort is greater in their estimation than the additional fruits of their labor would be worth. To be sure, much of our economic action goes on unconsciously. We accept a position, comparing its advantages and its disadvantages in a general way with those of other openings, but once we enter upon the work, we accept the daily grind as inevitable, and, in spending our income, think

[1] R. C. Chapin, *The Standard of Living in New York City*, p. 70.

not of the sacrifices it has cost us, but simply of how we can get the maximum satisfaction from it.

In discussing future wants we saw that postponing the consumption of goods from the present to the future came to require compensation only after a certain amount had been saved. Under present methods of production, it was explained in the preceding chapter, a large amount of this postponement of consumption is required. Machines must be made, and the result of this labor cannot be enjoyed until these machines have been used up in making finished products. This means that some one must wait for the result, and in many cases be paid to do it. Thus production may require, in addition to compensation for labor, a payment for *waiting*. This is a point which will be discussed further in the chapter on interest.

Cost of Production, Expense of Production, and Opportunity Cost. — The preceding paragraphs explain one important sense in which the term "cost of production" is used, *i.e.* (1) the *subjective cost* of irksome labor or reluctant waiting. But (2) the phrase is also commonly used to refer to the *expense of production*, that is, the amount of money spent in producing a commodity. (3) A third meaning is also found, which has been termed *opportunity cost*. Let us say that a person is confronted by the alternative of engaging in either of two occupations. He may become a lawyer or he may become a merchant, but he has not the time to be both. If he chooses to be a lawyer, he sacrifices his opportunity of being a merchant. Cost in this sense is sometimes called "alternative cost," or "displacement cost." This is not an ultimate cost, but it probably has a more direct and more important influence upon most of our economic choices and decisions than has any other kind of cost. Moreover, in the actual conduct of life opportunity cost and direct cost are generally inextricably blended. The increasing irksomeness of Crusoe's task of picking berries, for example, may be deemed to have been caused in large measure by the pressure of other demands upon his time. We haven't time enough to do all the things we should like to do, and so we have to apportion our time according as we think that one use of

it or another is the more important. And, in general, we try so to apportion our time that the fruits of the last or marginal increment of time devoted to any one purpose shall have no more or no less utility than those of the marginal unit of time devoted to any other purpose.

Taking "leisure" as a collective name for all of the non-economic uses of time, that is, for all uses of time for other than productive or money-making purposes, it appears clearly that a worker with free command of his time will carry his chosen line of effort up to the point (or margin) where leisure attracts him as much as the products of his exertion, or, in modern economic life, as the things he can acquire with the money he earns. As in the expenditure of money, so in the expenditure of time and effort: we tend to bring our expenditures up to margins where utilities gained and utilities sacrificed or foregone are equal.

QUESTIONS AND EXERCISES

1. If you had four sacks of corn all alike, could you tell which is the marginal one?

2. May one properly speak of the marginal utility of an indivisible good,—a house, for example?

3. If an individual estimates his present wants as 10, 8, 6, 3, 1, and his future wants as equivalent to the present value of 9, 7, 5, 2, 0, and if he has $9, and if each want is satisfied with $1, how many dollars will he save?

4. Give as many expressions as possible that are equivalent to the term "subjective value."

5. Comment on the following: "Doubtless the best thing to do about them (the spendthrifts) is to do nothing — not even to worry about their waste of money. Their waste of money, in fact, is the least silly thing they do, for the money is in constant flux and serves its purpose." *World's Work*, June, 1906.

6. Comment on the following words of Adam Smith: "Nothing is more useful than water; but it will purchase scarce anything; scarce anything can be had in exchange for it. A diamond, on the contrary, has scarce any value in use, but a very great quantity of goods may frequently be had in exchange for it." *Wealth of Nations*, Book I, Chap. iv.

7. Point out the differences in the tables of consumption statistics quoted in the text. How do they modify Engel's statements? Suggest explanations of these differences.

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PART II

VALUE AND EXCHANGE

CHAPTER X

VALUE AND PRICE

If every family produced all the goods needed to supply the wants of its members, most of the problems which today confront economic science would not exist. Most of the world's workers are, however, contributing their services either directly or indirectly (through the production of goods) toward the satisfaction of the wants of others. One's economic well-being today depends primarily on two things: the money income which can be got from others in return for one's services or for the use of one's land or capital, and the amount of things that can be bought with this money income. The federal census of 1910 showed that about 93 per cent of the men over twenty years old and about 18 per cent of the women of corresponding age were employed in money-making occupations; and this number does not include those landlords and capitalists whose income was derived entirely from their investments. The work of the housewife and the services of friendship embody utilities, that is, satisfy human wants, just as do money-making activities, but they are not reported in terms of dollars and cents. The production of wealth is in these days mostly "for the market," and wants are satisfied very largely by goods obtained from the market. In the vast interlocking system of modern economic life most goods get from those who produce them to those who use them by the processes of exchange.

The Meaning and Significance of Value. — It rarely happens nowadays that goods are directly exchanged for other goods.

Goods are usually sold for money,[1] and the seller uses the money in the purchase of other goods. *The amount of money for which a unit of a given commodity exchanges is the price of that commodity.* Since prices vary, when we wish to name the actual price of any commodity we must specify the price in a given market at a given time.

From this simple and familiar concept of price there has been developed the more general concept of *exchange value.* If a hat sells for two dollars, a pair of shoes for four dollars, and a pocket knife for fifty cents, we say that the exchange value of the hat is half that of the pair of shoes and four times that of the knife. It thus comes about that we attribute exchange values to goods in accordance with their relative potency in exchange, as shown by the prices at which they sell. In this way values come to be thought of as *magnitudes.* Just as weight and volume are physical magnitudes by which we express the relative heaviness and the relative bulk of different objects, so exchange values are economic magnitudes or, more specifically, exchange magnitudes. The exchange value of a good is thus the resultant of its exchange relations with other goods.

Exchange value is a purely relative or comparative magnitude, and there is no way of expressing or measuring the exchange value of a good except in terms of its command over other goods. In such a measurement exchange value can be expressed either as a *quantity* or as a *ratio.* We can say (1) that the value of a pair of shoes is that of eight knives or (2) that the value of the shoes is to the value of a knife as eight is to one. We thus express the exchange value of any good either by stating the quantity of other goods that can be obtained for it or by stating its ratio of exchange with other goods. The exchange value of any one commodity can, of course, be expressed in terms of any other commodity. Price is a statement or expression of exchange value in terms of money. To say that the price of a pair of shoes is four dollars amounts to saying that the value of the pair of shoes is four times the value of a dollar. When the words

[1] In this chapter the word " money " is used in its broadest sense, thus including credit instruments, which are, of course, merely promises to pay money.

" value " and " price " are used interchangeably, as will sometimes be our practice in this book, there is implied the assumption that the value of money as expressed in terms of other things than the particular commodity we are discussing is constant, — an assumption which, of course, does not entirely correspond with the facts.

Exchange values are determined by what may be called the " price process." This term is used in a narrow sense as referring to the fixing of the money values of commodities; in a broader sense it includes also the determination of the different rewards received by those who have contributed to the production of these commodities. In this broad sense the problem of prices is the problem of the distribution of wealth. Imagine the case of a mechanic employed at a particular time in the manufacture of machinery that will be used in a flour mill. The final product of the mechanic's labor — the only product directly useful in the satisfaction of human wants — is the flour, or bread made from the flour. To the making of this final product thousands besides our mechanic — farmers, agricultural laborers, railway officers and employees, other mechanics, and so on in a practically endless list — have contributed. What determines the price of the final product? What proportion of this price goes to the mechanic? What is his share worth to him as the means of getting the necessaries of life? Of these three questions, the first and third fall within the problem of the prices of commodities; the second, relating to the wage-price of the mechanic's services, falls within the problem of the distribution of wealth. At present we are concerned only with prices in their narrower sense, although the principles to be developed apply also in the case of the prices paid for the services of the factors in production. The significance of the subject of value in economic science lies in the fact that, within the conditions set by existing institutions, and within the limits set by the total production of wealth, human welfare, so far as it is dependent upon the possession of economic goods, is largely determined by the process of fixing price relations.

The Market. — It is conceivable that the prices of goods

might be fixed by public authority, or that the production of the most important commodities might be monopolized. Then, too, it is possible to imagine a condition of society in which custom should have such power that prices, when once established, would be changed very infrequently. Still another possibility is a régime of competition in which every man is left free to buy and sell as he pleased at such prices as he can get. The first three factors — public authority, monopoly, and custom — are among the things which determine the ratios at which goods are actually exchanged today; but the dominant factor is the fourth one mentioned — the free competition of the market.

In this connection we mean by the *market*, not a particular place for buying and selling, but *the general field within which the forces determining the price of a particular commodity operate.* For some commodities, especially perishable ones, like fresh milk and cream, the market is distinctly a local one. In the case of great staple commodities like wheat and cotton, the market is a world market, for it is impossible that the prices of wheat or cotton in Europe should differ for any considerable time from their prices in America by more than the expense of transport. So-called "international" securities, such as government bonds and the stocks and bonds of certain great corporations, afford even a better example of goods for which the market is a world market. Some commodities are used only in a particular locality or country, although produced in many different places. The American consular reports frequently contain advice to American manufacturers as to special kinds and varieties of goods used in different foreign countries. The cotton mills of England, Germany, and the United States all make special grades of cotton cloth designed especially for the Oriental market. Much more numerous, however, are the goods which, although of wide and general consumption, are produced in but few localities. This is especially evident in the case of agricultural and mineral products, but it is increasingly noticeable in manufactures.

Along with this localization of industry there has been a broadening of the field of consumption of many commodities.

Among the factors which have contributed to this result may be mentioned, first, the increasingly cosmopolitan character of modern life, — a result of more generally diffused facilities for higher education, as well as of the growing ease of travel and communication; and secondly, what has been called the "standardization of taste," — a result in part of modern advertising methods and of the standardization of products which is one of the fundamental features of modern machine industry. Notwithstanding the barriers which still exist in the form of protective tariffs and local prejudices, a dominant feature of modern markets is the increasing localization of production and the extension of the field of consumption.

Exchange Value and Subjective Value. — Exchange value is often called market value or objective value, and is sharply to be distinguished from subjective value, which, it will be remembered, is the relative importance attached by an individual to a particular unit of a commodity. Exchange value is an objective, ascertainable fact of the market. Subjective value is a matter of individual feelings and preferences, and is different for different individuals. An error which we must especially guard against is that of thinking that exchange values are in any accurate sense the expression of the subjective values of different goods to society at large. Exchange value is the outcome, the resultant, of the individual subjective valuations of many different persons, the poor and the rich, the wise and the foolish, but it does not correspond to "social subjective value," or "social marginal utility," for these two last phrases are meaningless. It is true, of course, that our own valuations are largely socially determined in the sense that, lacking much real independence of judgment, we follow and imitate other people in making our own estimates of the relative desirability of different commodities, and that we are even prone to judge of the relative importance of different things for our own purposes by their costliness, that is, by their exchange values, rather than by an independent analysis of our own needs. But the differences in our tastes and the differences in our powers to gratify our tastes are quite as important factors in determining

the exchange values of things as are our similarities. Just what is the point of connection between subjective values and exchange values we shall discover in the analysis of supply and demand.

Supply and Demand. — The only goods which are valued in the market are economic goods; that is, such goods as combine the characteristics of utility and scarcity. This statement is a truism, for no one will pay for things that he does not want or for things that can be obtained freely. Utility and scarcity affect the market value of goods through the operation of the forces of demand and supply. The general " common-sense " explanation of the valuation of goods takes the form of the statement that values are determined by supply and demand. When rightly interpreted, this statement cannot be criticized, but it is often used in a misleading way. Producers do not usually throw a " supply " of goods unreservedly on the market, accepting any price that can be got for them, nor do consumers generally demand definite amounts of goods, without reference to the price of them. An entirely accurate statement, and one that is less apt to be misinterpreted, is that *prices are among the factors determining supply and demand.* It may seem, accordingly, something like arguing in a circle to attempt to explain exchange value by using the formula of supply and demand; but the fact is that the explanation is to be sought in the action of mutually dependent forces, rather than in any one principle.

The Nature of Demand. — Mere desire for a commodity is not demand for it. The desire of the poor man for the counterpart of his wealthy neighbor's motor car is in no sense demand. *Effective demand* is sometimes defined as desire coupled with the ability to pay. But to make demand really effective there must be added to these the inclination to buy: desire must be *intense* enough to lead to purchase.

If I purchase a certain quantity of a particular commodity, it is because I desire it at least as intensely as anything else I can purchase with the same amount of money. When I ask myself whether a certain contemplated purchase is " worth its price " to me, I am comparing the importance of the purchase in question

with the importance of other uses of the money which the price represents. It is, in other words, a matter of my subjective valuations. Now my subjective valuations, it will be remembered, depend not only upon my tastes and my purposes, but also (on account of the law of diminishing utility) upon the extent to which I am already supplied with goods like that whose purchase I am considering, as compared with the extent to which I am supplied with other things. In choosing and picking among the different alternatives open to me as a purchaser, in buying one thing rather than another, in acquiring more of this and less of that, I merely express my subjective valuations. A certain minimum supply of one commodity — a necessity of life, perhaps — may be more important to me, may possess a higher utility, than any possible amount of some other commodity, — a luxury, for example. But I may deem it less important to have a large supply of the first commodity than to have *some* of the second commodity. If I push my expenditures for any one purpose too far, I sacrifice the satisfaction of more important wants for the satisfaction of less important wants. Think of one's purchases as being divided, not into such units as pounds, bushels, yards, and dozens, but into units defined by the quantity one can purchase for a dollar, — into "dollar's worths." Each of us, by buying the things he wants more than he wants other things, tends to keep the subjective values of the last or marginal dollar's worths of all the different kinds of goods he consumes equal, one to another.

As our tastes and desires and purposes change we alter our scheme of expenditures accordingly, but always so that our marginal dollar's worths are kept, as it were, in equilibrium. But even if our desires were constant, changes in prices would in themselves effect continual alterations in the proportions of various things that make up our purchases. The various dollar's worths become larger or smaller and acquire larger or smaller subjective values. If the price of a commodity decreases to such an extent that an additional dollar's worth gains a subjective value greater than that of other dollar's worths, we normally purchase it. If the price rises, we normally curtail our ex-

penditures for this particular commodity, and may even, under some circumstances, become sellers of it (as in the case of the householder who has bought a large supply of coal at five dollars per ton, and who, when the price rises to ten dollars, is willing to sell part of it). Some of the foregoing discussion may seem to be a statement of what is obvious and commonplace, but the neglect of these seemingly obvious factors is responsible for more than one erroneous explanation of the way in which prices are determined.

The Demand Curve. — The relations between price and demand may be shown concretely by the analysis of the conditions in a hypothetical market. Imagine the case of an isolated community in which wood is used as a fuel. The conditions might be such as are represented graphically in Figure 1. In this diagram distances measured from O along the horizontal line OX represent different amounts of wood, while distances measured vertically from the line OX represent prices. Assuming that the conditions of demand were as represented in the diagram, if the price of wood were MP dollars a cord, OM cords of wood would be bought. If MP represents a relatively high price for wood, this might mean that many families would choose to go without wood, using other kinds of fuel instead. Others would be content with a scanty supply. If, however, the price were reduced to $M'P'$ dollars per cord, some of the families who would have refused to buy at the higher price would purchase wood, while others would increase their purchases, so that OM' cords would be bought. Similarly, at the price $M''P''$, the amount bought would be OM'' cords. Other possible prices might be indicated on the diagram, so that, in general, the curve DD' (which we may call the demand curve) represents the relation between price and the amount purchased.

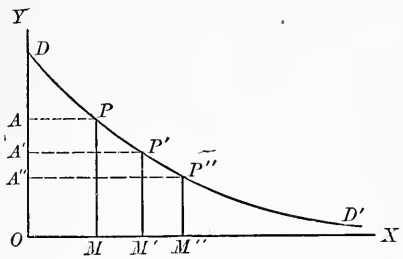

FIG. 1.

More definitely, the demand curve represents the amount of a given commodity which can be sold in a given market at each of all possible prices.

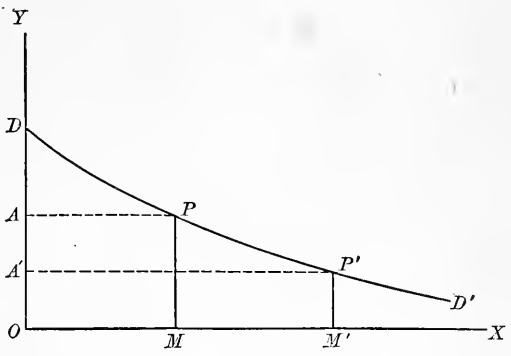

Fig. 2.

The Elasticity of Demand. — By the elasticity of demand we mean the *extent* to which the amounts purchased vary with changes in price. In every family in poor or moderate circumstances the housewife carefully economizes in the use of eggs during periods when they are high in price, using them more freely when the price is lower. The demand for eggs is therefore *elastic*. Relatively *inelastic* are the demands of most families for such things as flour and salt. Other commodities, such as sugar, may occupy an intermediate position. Figures 2 and 3 represent, respectively, elastic and inelastic conditions of demand. It should be understood that the demand curves for most commodities are probably not so smooth and regular in their slope as are these diagrams. It may often happen that the elasticity of demand is different for different portions of the demand curve. The demand for bread, for example, would probably be much more elastic at very high prices than at very low

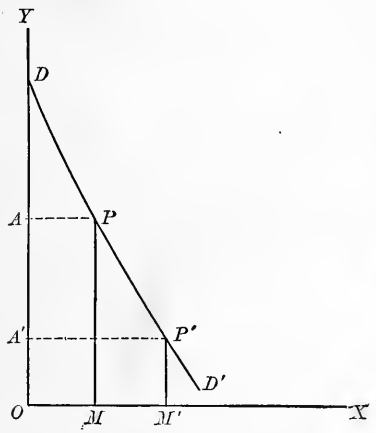

Fig. 3.

prices. The demand for salt, on the contrary, would probably be less elastic at prices so high that it would be used only as a food than at prices low enough to permit its use (as at present) for various industrial purposes. Without giving further concrete examples, the following propositions respecting elasticity of demand may be stated: (1) Demand for necessities is in general less elastic than demand for luxuries. (2) Demand the commodities the use of which constitutes a habit is less elastic than demand for commodities the use of which is generally a matter of conscious decision. (3) The more adequate the substitutes for a particular commodity, the more elastic will be the demand for it. (4) The demand of persons of large income is less elastic than that of persons in poor or moderate circumstances. (5) A corollary of proposition *four* is that the higher the general level of well-being in a community, the less elastic will be the demand for most commodities.

The rectangle $OMPA$ (in any one of the three diagrams) represents the total amount buyers pay for a certain commodity when the price is MP, just as the rectangle $OM'P'A'$ represents the total amount paid when the price is $M'P'$. If the demand for the commodity is distinctly inelastic, this total value will be less when the price is low than when the price is high.[1] At the lower price less money will be expended for this particular commodity and more money will be available for other uses. If, on the other hand, the relations between price and demand are such that the rectangle $OM'P'A'$ is larger than the rectangle $OMPA$, a drop in price from MP to $M'P'$ will result in a curtailing of expenditures for other things. This might involve only a decreased use of direct substitutes, such as coal in place of wood; generally, however, it would mean a diminished consumption of a number of other things. But this is a gain, not

[1] Elasticity of demand may be represented mathematically by a fraction whose denominator is the relative (or percentage) decrease in price and whose numerator is the corresponding relative increase in the amount demanded. Following the notation used in Figures 2 and 3, this is the ratio of MM'/OM to AA'/AO. When the elasticity of demand, thus expressed, is equal to $MM'/OM + 1$, the rectangles $OMPA$ and $OM'P'A'$ are equal; that is, the same total amount is expended for the commodity when the price is MP as when the price is $M'P'$.

a loss. For the lower price would not be accompanied by the purchase of a larger quantity, if the additional purchases did not satisfy more intense wants than other things that might have been purchased with the money. Larger "dollar's worths" will have been substituted for smaller ones.

In this way the demand for any one commodity is affected by changes in the prices of other commodities. The competition of the market thus embraces not only the buying and selling of one commodity, but also the buying and selling of all commodities. In this sense the wood dealers compete with the grocers and the tailors, as well as with the coal dealers and with each other.

Consumers' Surplus. — Whatever the price of a competitively produced commodity may be, there are almost always some buyers who would have paid more if it had been necessary. Referring to Figure 1, if the price is $M'P'$, those who are just willing to pay that price, who would either have bought less or bought none if the price had been higher, may be called the marginal buyers. These are relatively few in number, however, as compared with those who would have bought even if the price had been higher. The utility of the marginal purchases to the buyers is but little more than the utility of other things that could have been bought with the same amount of money: in such cases the utility of the purchase only about equals the sacrifice involved. In the case of all other purchases, however, there is a *surplus of utility over costs* (whether costs are measured as money costs or as the utility of the other possible purchases which are given up) which is called *consumers' surplus* (or sometimes consumers' rent, or buyers' gains).

It might be supposed at first thought that if the price were, for example, $M'P'$ (Fig. 1), the area included between the horizontal line $A'P'$ and the curve DP^1 would represent consumers' surplus. This is not exactly true, however, and that for two reasons: in the first place, the satisfaction of additional wants which a lower price makes possible may make the more important wants less intense. A man might be willing to give ten dollars for a cord of wood in order that at least one room in his house could be heated during the winter. He might also be willing to give seven dollars a cord for two cords, so as to heat two rooms, but the heating of the second room might render the heating of the first room less important to him. He might not be willing, for example, to give ten dollars plus seven dollars in order to have the two rooms heated. In the second place, utility itself is to a large extent affected by price. So far as our purchases satisfy what has been called the desire for distinction, or represent what Professor Thorstein Veblen has called "conspicuous consumption," a lowering of the price of a

commodity would lessen its utility to us. The successful production of artificial diamonds at a low cost would lessen the desire which most people have for natural ones. If touring cars were less an indication of one's ability to spend money freely, they would be less esteemed by not a few people. On the other hand, it might occur in some cases that a certain amount of decrease in the price of a commodity, permitting a more general consumption of it, would increase the esteem in which it is held by those who are glad to follow fads. In general, we must say that even if we had absolutely complete statistics of the actual relation of prices to demand, consumers' surplus would still be an incommensurable thing. It is nevertheless a real thing, and is especially significant as constituting one of the differences between real income and money incomes.

It should be noted, however, that consumers' surplus relates only to one's consumption of a particular commodity, taken by itself, for, as we have seen, the amount which we are willing to spend in the purchase of any one commodity depends not only on the price of that commodity, but also on the prices of the other commodities that make up our purchases. The surpluses which a consumer gets in his different lines of consumption cannot be added together to form a total. I might, for example, be willing to pay as much as four dollars for a hat that I can get for two dollars. And if I pay only two dollars for the hat I might be willing to pay as much as six dollars for a pair of shoes that I can get for four dollars. But it does not follow that I should be willing to pay four dollars for the hat *and* six dollars for the shoes.

The Nature of Supply. — The amount of goods that will be supplied in a given market at a given time depends, like the amount demanded, on the price. "Forced sales," in which goods are offered for whatever can be got for them, form about the only important exception. The effect of price on supply varies, however, according to the length of time that is taken into consideration. The work that is being done today in the extension of old factories and the building of new ones, the construction of railways, the taking up of new land, is based on estimates of *future* prices, the present prices of agricultural and manufactured products and of railway transportation being of significance only so far as they indicate what future prices will be. The merchant's stock in trade is bought on an estimate of future business conditions; the amount of land the farmer allots to wheat and corn, respectively, depends on his estimate of the relative prices the two will bring after the harvest. In a

similar way the amounts of goods that can be supplied to the market today are limited by the estimates which business men and farmers have made in the past of the prices which buyers are willing to pay today. It would be possible, though not necessary for our purposes, to analyze the way in which the amount of the capital and labor which have thus been applied to the production of things that will satisfy present wants was partially determined by conditions which existed still farther back in the past, and so on in an indefinitely receding series.

The amount of goods available for the market of today is thus determined not only by past estimates and conditions, but also by present estimates of future conditions. Every seller has the option of selling at the present price or of waiting for possibly higher future prices — an option which is limited only by the perishability of his goods and the urgency of his need for money. And the most urgent need for money does not necessarily force an immediate sale if his opinion as to the future value of his goods is a reasonable one, for in this case it is usually easy to borrow money on the strength of the marketable value of the goods.

The Supply Curve. — In the analysis of the conditions of supply existing in a particular market at a particular time we do not have to take account of the limitations imposed by the forms which productive efforts have taken in the past. At any given time a certain definite amount of a commodity is available for the market: this forms what may be called the *potential supply*. The proportion of this potential supply that sellers will be willing to part with at a particular time will depend primarily on the prices they can get. If the price of a unit of a commodity is $M'P'$ (Fig. 4), the sellers will be willing to sell a certain number of units of it, which may be represented by OM'. If the price were

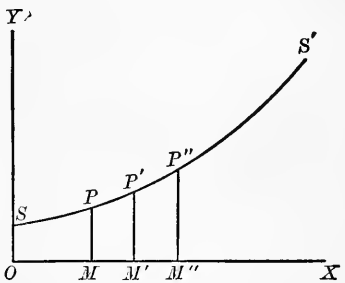

FIG. 4.

as low as PM, however, some sellers would prefer to wait for higher prices, the amount thus withheld from the market being represented by MM'. At the price $M''P''$, however, an additional supply ($M'M''$) of the commodity would be forthcoming from sellers who were not tempted by the price $M'P'$. In general, the supply curve SS' represents the relations between price and the amount that will be supplied in a particular market and at a particular time.

The Determination of Price. — The foregoing discussion of the nature of demand and of supply makes it possible to advance another step in our analysis of the determination of price, by asking ourselves what will be the result of the simultaneous operation of the forces of demand and supply. This condition is represented graphically in Figure 5, where the demand curve and supply curve are combined in one diagram. If the curve DD' represents the potential demand in a particular market at a particular time, and the curve SS' represents the potential supply, the price which would be fixed by the free working of competitive forces would be PM, located at the point where the two curves cross. At this point demand and supply are equal, both being represented by OM. It is impossible that the price should be fixed at any other point, $M'P'$, for example. For if $M''Q$ be drawn so as to equal $M'P'$, it will be evident that at this price OM'' units will be demanded, while only OM' units will be supplied. Most of the buyers, however, are willing to pay more than $M'P'$ if necessary, so that in order to secure their share they will bid the price up until an equilibrium is reached. This is what John Stuart Mill meant when he said that " value always adjusts itself in such a manner that the demand is equal

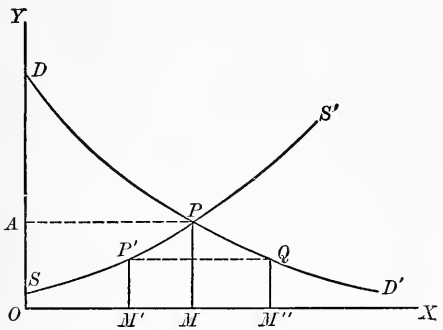

FIG. 5.

to the supply," — a statement which has often been misinterpreted, and consequently unjustifiably criticized.

The prices for which goods are sold in a competitive market are thus the outcome or resultant of the individual valuations of all who buy and sell in the market. Each buyer or seller, taken by himself, affects only inappreciably the price at which he buys or sells. All that he can do is to buy or sell or refuse to buy or sell, or to buy or sell more or less. For each individual trader the market price is something beyond his own control. And yet each has a part in that collective supply and demand which is the controlling factor in making the price whatever it happens to be.

Producers' Surplus. — Just as the area APD (Fig. 5) has sometimes been considered, not altogether accurately, to represent a "Consumers' Surplus" (of utility over costs), so the area APS has been considered to correspond to what has been called "Producers' Surplus" or "Sellers' Gains." This surplus should not be thought of as corresponding to the actual profits of the sellers; that is, as being in any way a surplus of receipts over and above the expenses of production. That part of the supply which had been *produced* at the smallest expense is not necessarily the part which its owners would be willing to *sell* at the lowest price. It cannot be too strongly emphasized that the analysis of demand and supply thus far presented relates only to the conditions existing in a particular market *at a particular time*. All that we can say is that when OM units are sold at the price of MP per unit, the total receipts of the sellers are represented by the rectangle $OMPA$; while the area $OMPS$ represents what they would have been willing to sell the same amount of goods for, had they not been able to get a larger return. There is, as we shall see, a relation between the prices of things and the expense of producing them, when a considerable period of time is taken into consideration. At any given time, however, sellers are mainly governed by the relative profitableness of selling at existing prices or waiting for higher ones. The only kind of surplus which the area APS represents is an intangible, hypothetical thing, — the difference between actual receipts and the amount which would have been received if each seller had sold each portion of his supply for the minimum price he would have been willing to take for that portion.

QUESTIONS

1. Is there such a thing as "intrinsic value"? What is usually meant when the expression is used?
2. How can one buy more or less of a non-divisible good, like a house?

3. Does the tendency of each individual to maintain the equilibrium of his margin of consumption result in the maximum satisfaction of his wants?

4. What relation is there between the amounts which a college student pays for room rent, for food, for clothing, for books, and for athletics?

5. Which of your customary purchases would you still make if prices were doubled? Which would you curtail? Which would you omit?

6. Illustrate the propositions relating to elasticity of demand (p. 160) by concrete examples.

7. Construct an imaginary demand "schedule," showing in parallel columns (1) six or eight different possible prices of wood per cord, and (2) the number of cords which an imaginary purchaser would buy at each stated price. Construct in the same way other demand schedules for each of four other possible purchasers. Combine these five individual demand schedules into a collective demand schedule showing the total amount of wood that could be sold at each price. Construct in a similar way individual *supply* schedules and a collective supply schedule for four sellers of wood. Assuming that all the wood sold is sold at a uniform price, how much wood will be sold and at what price ?

8. "For some years the supply of Brazilian coffee was greater than the demand for it." Criticize and amend this statement.

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CHAPTER XI

VALUE AND PRICE (*Continued*)

Some of the most important factors in the determination of exchange values are not revealed by an analysis of the conditions of supply and demand which happen to exist at a particular time. In the preceding chapter we assumed the existence of a certain potential demand and a certain potential supply, and explained how these result in the equilibrium of actual demand and supply at a certain price. Our next task is to inquire into the influences which determine potential demand and potential supply. For this purpose we shall need to pass from the study of the way in which the preferences and choices of individual buyers and sellers react upon and fix the particular market price which exists at any one time to an inquiry into the operation of certain slowly acting movements and tendencies.

The demand side of this problem need not detain us. Demand will change with changes in incomes, tastes, fashions, and the like. The effect of these influences is so obvious that it may be taken for granted. The supply side of the problem, however, needs further study. The potential supply of the present is limited by conditions set by past industry. The amounts of different kinds of consumption goods that are ready for present use depend upon the direction which the work of production has taken in the past. What, *in the long run*, is the relation between supply and exchange value?

Prices and the Expenses of Production. — The dominant motive that guides farmers and business men in their investments of labor and capital is the desire for money profits. (By profits we here mean the difference between the expense involved in producing goods and the money that is obtained for them.) If it were always an easy matter for business men to

change their interests and their energies from one line of production to another, and if capital and labor could likewise be freely transferred from one undertaking to another, it is hard to see how profits in any one competitive industry could be for any length of time much higher than in other competitive industries. Managerial ability, labor, and capital would gravitate always toward those employments which promise the greatest profits. The effect would be a continual movement toward *equality of advantage in different fields of industry.* This does not necessarily mean an *equality of profits as between individuals* in any given line of business, for the amount of profits depends largely upon the ability and enterprise of the individual business man. But in a state of free competition, with alternative business opportunities as free and open as we have assumed, the profits of any business undertaking would hardly be larger, for any period of time, than the business man could get as salary by working for others, — for if working for others offered a greater return than assuming the risks of business for himself, he would naturally choose the salaried position, and *vice versa.* Purely competitive profits, under conditions of this absolute " fluidity " of business ability, of labor, and of capital, would thus tend to adjust themselves according to the ability of the individual business man; that is, to equal what we shall later describe as the " wages of management." If we include the value of the business man's services, thus measured, among the expenses of production, we may, obviously, state the tendency which we have described as *a tendency toward the equality of the prices received for the products of any particular industry and the expenses of producing them.*

The assumptions we have made do not, however, exactly correspond to the conditions of actual business. Managerial ability, labor, and capital are all specialized to a greater or less extent, so that they cannot be changed from one employment to another without loss of efficiency. But it is not necessary for the validity of our analysis that *all* managerial ability, *all* labor, and *all* capital should be fluid enough to change from industry to industry economically. There are always many

business men who are anxiously watching for the most inviting business opportunities; there is always a certain amount of labor awaiting the most remunerative employment, and there is always a certain amount of money awaiting investment in those forms of capital goods which promise the greatest return. These facts are enough to give substantial truth to the statement that in any competitive industry the price of the commodity produced tends to equal the cost of producing it. When the price of bicycles was high, as compared with the expense of producing them, existing bicycle factories were extended and new ones were built. The supply of bicycles was thus so increased that they could not be sold except at a much lower price. On this account and because of the cessation of demand, the profits in the manufacture of bicycles became relatively low, and many former bicycle factories are now used for other purposes. If the excess of the price of wheat over the expense of producing it promises to be greater than the excess of the price of corn over the expense of producing it, farmers will raise less corn and more wheat, and the result will be higher prices for corn and lower prices for wheat.

Normal Price. — Because the market price of a commodity cannot get very far away from the expense of producing it without resulting in abnormally high or abnormally low profits, and because the existence of abnormally high or abnormally low profits sets forces at work which are very sure to move the price closer to the expense of production, the name *normal price* is given to *that price which is just equal to the expense of producing a unit of a commodity.*

The effectiveness of the tendency of actual competitive prices to equal normal prices depends very largely upon the length of the period of time that is taken into consideration. The longer the period of time, the larger will be the proportion of managerial ability, labor, and capital that can be shifted from the less profitable to the more profitable undertakings. To build and to equip new factories and to extend old ones takes time; the supply of skilled labor in any occupation can often be increased but slowly, for many trades involve an appren-

ticeship of three or more years. In the undertakings that are becoming less profitable, although capital specialized in the form of machines may not be useful for other purposes, yet such machines need not be replaced as they wear out; while a skilled laborer cannot take up another trade without loss of efficiency, yet an increasing proportion of the incoming supply of laborers may begin their apprenticeship in those occupations in which there is a greater demand for labor.

While the conditions of long-period supply are thus such as to result in a constant movement toward the equalization of market price and normal price, it may easily happen that the two will never become identical. For market prices themselves are constantly changing under the influence of changing demand. And the increase in the output of an especially profitable product is often overdone. Periods of losses or of low profits may succeed periods of high profits. In short, the goal toward which business enterprise directs productive efforts is constantly shifting.

Different Conditions of Supply. — A fact of prime importance is that the expense of production (*per unit*) often varies as the amount produced is larger or smaller. But this relation between the amount of goods produced and the expense of producing them is different for different industries. In particular, three forms of productive undertaking may here be distinguished: those in which increased production is accompanied, in the long run, with (1) increasing, (2) decreasing, or (3) constant expense per unit of product.

1. If transportation facilities, the knowledge of agricultural methods, and other controlling conditions remain unchanged, the amount of wheat raised in the United States cannot be substantially increased without resort to lands less well adapted to the production of wheat, or the more intensive cultivation of lands already in use. Either alternative requires (as will be shown in a later chapter in more detail) the use of relatively more labor and capital per bushel in producing the additional wheat than was required for the wheat produced under the former conditions. This means that the production of wheat

cannot be substantially increased except at an increased expense per bushel. When this condition of *increasing expense* is met with — and it holds true generally in agriculture — normal price increases with an increase in production. If the price of the product is not high enough to repay the cultivation of the poorest lands used, they will cease to be cultivated. If the price of the product is appreciably higher than the expenses of cultivation, farmers will find it profitable to push cultivation still farther, up to the point where the expense equals the price.

2. In some industries, however, an increase in production will often bring forces into operation that will result in smaller expenses of production per unit of product. Where this condition of *decreasing expense* is found, a general increase in production brings, *in the long run*, a decrease in the normal price of the product. What is the nature of these economies that sometimes attend an increase of production? We rule out of consideration such things as new inventions and the general progress of industrial knowledge and technique, for although these things reduce the expenses of production, they are in no direct way a necessary result of an increasing output. They play a part, moreover, in agriculture (where they help to counteract the effects of the rule of increasing expenses) as well as in industries of decreasing expenses. Additions to our knowledge of ways of producing things are undoubtedly stimulated by the growth of production, which gives increased scope and importance to improvements in industrial technique; but for the purposes of the present inquiry we must put these things aside and merely assume *a given state of industrial knowledge*. The economies that create the condition of decreasing expenses are, properly understood, only such as are brought about, in a fairly direct way, by the increase of production itself. Here we must distinguish two things: first, economies in the general organization of whole industry, and, second, economies resulting from an increase in the size of the individual business establishments within the industry.[1]

[1] These are named by Professor Alfred Marshall "external economies" and "internal economies."

The most important of the first of these two classes of economies is a greater *specialization* or division of labor within the industry. The different processes in the operations of the industry may be separated and apportioned to different specialized plants, located, perhaps, at particularly advantageous points. Opportunity is given for a more thoroughgoing and more efficient specialization of labor and for the use of highly specialized machinery. Subordinate industries may be developed, supplying machinery and other equipment; improved transportation facilities of one kind and another may be secured. It becomes, in general, more feasible for the industry to utilize what are known to be the best and most economical methods of production and to keep pace with the advance of technical knowledge. Indirect, roundabout ways of doing things, involving a thoroughgoing subdivision of processes and the use of large amounts of fixed capital in the form of elaborate plants and expensive machinery are advantageous only when the industrial output is large. All these things have played an important part in the progress of most of the great manufacturing industries, and in making their products cheaper.

Unless some obstacle, some countervailing force, prevents, these economies are sufficient to make almost any large and growing industry one of decreasing expenses. And about the only obstacle that can stand in the way is the limitation of the supply of one of the necessary factors in production. The supply of capital has (as shown by the interest rate) kept pace with industrial demands. The industrial output has increased more rapidly than has the supply of labor, but in most industries this has not been sufficient to offset the movement toward decreasing expenses. But the supply of land and of natural products of various kinds is definitely limited. This is why agriculture, despite the fact that it benefits by some of the economies of specialization, is not an industry of decreasing expenses. For the same reason the lumber industry and petroleum industry have had to contend, in recent years, with increasing expenses.

The second class of economies — those connected with the

increasing size of the individual business unit — are usually named " the economies of large-scale production." These are of interest to us at the present stage of our study only in so far as large-scale production is in itself a result of the general growth in the volume of the output of an industry. Other things, such as the invention of new and effective " large-scale " methods of production and the cheapening of transportation (broadening the market open to a particular plant), have coöperated in stimulating the growth of large establishments. Our present inquiry is merely into the relation between the increase in the total amount of goods produced and the expense of producing them; that is, into the long-run relation between supply and normal price. And so our question is: Does a larger output for an industry at large encourage the growth of large individual establishments by increasing any advantages they may have over smaller establishments? It is clear that there is no invariable rule here, for in agriculture and in some special fields of manufactures and trade the average size of the individual undertaking is not increasing, despite the rapid growth of the total volume of output. But in nearly all the industries in which we have any reason to suspect the presence of the rule of decreasing expenses we find that the average establishment has been growing larger. This must mean that in many industries the first class of economies, already described, can best be utilized by relatively large establishments.

Whatever the real " economies of large-scale production " may be (and they will be discussed in the following chapter), they cannot *in themselves* be adequate to bring about, in any competitive industry, the general condition of decreasing expenses. Wherever the advantages of large-scale production are increasing, the principal effect must be merely to divide the aggregate operations of the industry among a somewhat smaller number of establishments than would otherwise be found. But the growth of the size of the business establishment has no direct bearing upon the existence of the condition of decreasing expenses in the industry at large, except in so far as an increase in the size of the individual establishment is found to be *one*

of the ways of utilizing to best advantage the various economies made possible by the increased industrial product. Large-scale production does not create the condition of decreasing expenses, but it may be an indication, a manifestation of the presence of that condition.[1]

3. In many hand industries, such as tailoring and cigar making, the expense of production per unit does not vary to any great extent with the amount produced. These are, therefore, industries with *constant expenses.*

Figures 1, 2, and 3 illustrate the relation of changes in supply to changes in price under the conditions of increasing, decreasing, and constant expenses, respectively. These diagrams must be carefully distinguished from the supply curve described in the preceding chapter, which related only to the conditions of supply at a particular time. They indicate the way in which an increased output, evoked by an increase in demand, will, in the long run, be offered to the market at higher, lower, or constant prices, depending upon the conditions existing in different classes of industries. In an industry of decreasing expenses (Figure 2), for example, OM units of product per year cannot be supplied to the market at a lower price per unit than PM. But, allowing time for the necessary reorganization of the industry, OM' units per annum can be supplied at a lower price, $P'M'$. In an industry of increasing expenses this relation between price and amount of output is reversed.

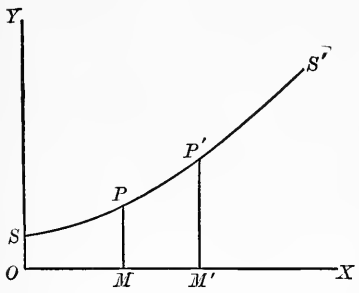

FIG. 1

Fixed and Variable Expenses. — There is no better illustra-

[1] We have thought it worth while to emphasize the merely indirect relation between the economies of large-scale production and the so-called "law" of decreasing expenses (or "increasing returns"), because there is much confusion of thought on this matter. Only when an industry is controlled by a monopoly, are the real economics of a large industrial output identical with the "economies of large-scale production."

tion of the necessity of keeping definite periods of time in mind when discussing problems relating to valuation than that furnished by the problem of the apportionment of specific expenses of production to particular units of products. In almost any industrial establishment, any increase in product will be attended by some specific increase in expenses: more raw material and more labor will be used, possibly more power; although the increased expenses for labor and power may not be proportionate to the increase in production. Such expenses are called *variable expenses*, and are to be contrasted with *fixed expenses*, which remain approximately the same, no matter what the amount produced is. The interest on the funds invested in the factory building and its equipment of machinery is a fixed expense; the expense of management and general office expenses will not usually be increased proportionately by an increase in the annual product of an establishment.

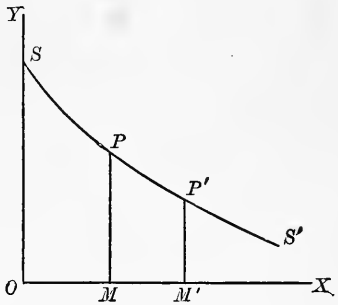

FIG. 2

It is often assumed that wherever only a part of the expenses varies with the amount produced, the establishment is *ipso facto* one in which large-scale production is especially economical. Whether this assumption holds true or not often depends on the scale of production we have in mind. Factories and other plants are built with a certain maximum capacity, and until that maximum capacity is utilized, production may be increased without a proportionate increase in expenditure. But when the maximum is reached, more equipment, and often more buildings, will

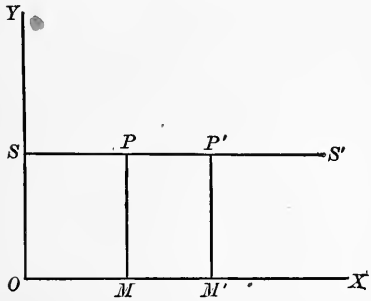

FIG. 3

be needed before there can be a further increase in product. There is often a certain most efficient size of plant; an increase in business beyond the capacity of the most efficient size of plant necessitates either a curtailing of the business or a duplication of the plant. When business conditions are such as to warrant temporarily pushing the output of a plant beyond its normal capacity, the result usually is, as every manufacturer knows, that this increased output is produced uneconomically, that is, at relatively increased expenses of production.

Many seemingly constant expenditures (like interest on the cost of the plant) are variable in the long run. Such expenditures increase, but only at considerable intervals of time, as additional investments in fixed capital are made. A long-period supply curve corresponding to the conditions of production in such a business might be something like Figure 4. This diagram should be interpreted as follows:

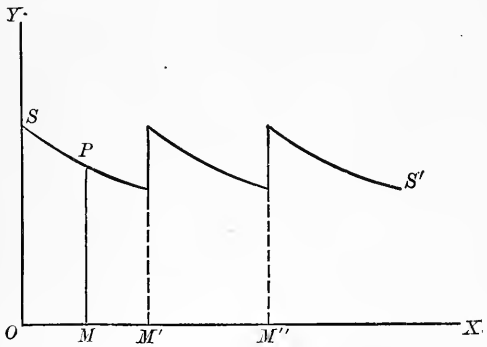

FIG. 4

The total expense of producing a certain output, OM, is represented by the area $OMPS$. MP (considered not as a mere line, but as an indefinitely narrow area) represents the variable expense which would not be incurred if the volume of production were a little smaller than OM units. MP, then, represents the *marginal expense*, in this particular establishment, of producing OM units. Thus the irregular curve SS' represents the way in which the aggregate expenses of production are increased as the output (measured on the line OX) grows. When the product reaches OM' units, and again when it reaches OM'' units, fresh investments of large amounts of capital are necessary. From the long-time point of view, such a business might very

possibly be one of approximately constant expenses; although of course some of the real economies of large-scale production might be present and might result in decreasing expenses.

The Relation of Fixed and Variable Expenses to Price. — The fact that, within limits, the expenses of a business undertaking do not increase proportionately as the output increases has an important bearing upon competitive price-making. The proprietors of a business establishment will feel justified in increasing their output, provided the additional output will sell for enough to afford some profit above the actual amount by which it *increases* their expenses. If the full capacity of their plant is not already utilized, they will count as profit any additional income they can secure above the necessary increase in variable expenses. If they are producing some staple commodity for the general market, so that they cannot discriminate in the prices at which they sell to different buyers, they will find it difficult to make much use of this possibility of cutting prices on part of their output. But if they are producing a variety of goods, if they are making highly specialized products " to order," or if they are selling in two or more widely separated markets, they may often be able to increase their output by accepting prices too low to contribute anything to the payment of their fixed expenses. This is often the explanation of the " dumping " of part of a manufacturer's product on a foreign market at a lower price than he charges at home. Railways are able to take advantage of the fact that (for the time being) only part of their expenses vary with their traffic, for they do not have to charge a uniform rate per ton per mile, but can classify their rates according to the origin, destination, and nature of the traffic. The rates charged by electric plants are often less for current used at certain hours of the day when the capacity of the plant is only partly utilized. The reader will probably be able to supplement these illustrations with others based upon his own observation.

If a business establishment is hard pressed by competition, or if for any other cause, such as a dull season, its sales are small, its proprietors may decide to cut prices on their whole out-

put to a point that will cover the variable expenses and possibly contribute something toward meeting the fixed expenses. Some fixed charges, like depreciation, interest, rent, insurance, taxes, will continue even if the output is little or nothing. It will very likely be sound business policy to make the best of a bad situation by getting what little income can be had over and above the variable expenses of production. Much money may have been irrevocably invested in the business, and although possibly under no conditions can it be made to yield the return that had been expected at the time when the investment was made, matters will not be bettered by letting the plant lie idle. It may be that the prices which the proprietors of the business thus reluctantly decide to accept are high enough to pay all the expenses of production, fixed and variable, in some competing plants, better organized or more favorably located. Or it may be that some or all of the competing plants also find it necessary to accept prices that do not cover their fixed expenses. Sometimes the fact that it is more profitable to produce at prices which cover merely the variable expenses than not to produce at all leads some one establishment to cut prices. Other establishments have to reduce prices in order to protect themselves, and a period of cut-throat competition may ensue.

Though at any given time it may be the variable rather than the aggregate expenses of production per unit of product which fix the price at which some or all of the different establishments in an industry are selling their products, it should not be inferred that it is the variable expenses alone which measure the *normal price* of a product. For in the long run prices have to be high enough to induce the replacement of fixed capital as it wears out and (in a growing industry) to attract new permanent investments of capital. That is, in the long run, prices have to be high enough to cover both variable expenses and fixed expenses, — which last, as we have seen, are generally variable as seen through a sufficiently long period of time. As a matter of fact, the prices in any large competitive industry are usually high enough to more than cover the expenses of production in the most efficient establishments, but are rarely

high enough to cover all such expenses in the least efficient establishments. For the time being the weaker establishments may continue in operation, but sooner or later they are sure to be forced out. The better establishments will be enlarged, and new and possibly yet more efficient ones will be built. If, however, none of the establishments in an industry is able to cover all of its expenses, the volume of output must eventually decline to a point where prices can be secured that will cover interest, depreciation, and the other fixed expenses that must be provided for if the recurrent needs of the industry for fresh investments in fixed capital are to be met. It is in these ways that the tendency of prices to equal the expenses of production manifests itself.

Joint Expenses of Production. — When the production of one commodity is inevitably accompanied by the production of one or more other commodities, it is often impossible to assign a definite part of the total expense of production to any one of the commodities. It is impossible to separate the expenses of producing tenderloin steaks from the expenses of producing soup bones, or either one of these from the expenses of producing hides. Mutton and wool, cotton and cotton seed, coal gas and coke, are familiar examples of commodities produced under conditions of joint expense. Modern methods for the utilization of industrial by-products have greatly increased the list of commodities produced under such conditions.

What is the normal price of these jointly-produced commodities? Take first the simplest case: that in which *all* the expenses of producing two commodities are joint expenses. Neither commodity can be said to have a normal price of its own, for neither commodity has specifically assignable expenses of production of its own. But the two commodities, taken together, have what may be called a collective normal price. Suppose, for example, that the production of every unit of one commodity is necessarily accompanied by the production of two units of the other commodity. It is evident that in order to induce the production of these commodities the price of a unit of the first commodity plus the price of two units of the second

commodity must cover the joint expense of producing these three units. This joint expense, then, measures the collective normal price of the three units. Just how the market prices which, in their sum, will tend to approximate this collective normal price, will be fixed, will depend upon the conditions of demand for each of the two commodities. Sometimes one or both of the jointly produced commodities will have to compete in the market with substitute commodities produced under other conditions, and this, of course, tends to limit the possible range of price variation.

When, as often happens, two commodities are produced under conditions of *partially* joint expenses, further processes being necessary to fit each commodity for the market, the price must in each case cover the specific or assignable expense. The joint expenses will be assigned to one or the other of the commodities, or apportioned between them, according to the relative demand for them. So far as the expenses are joint they are in some respects similar to the fixed expenses of any establishment producing under the ordinary conditions of fixed and variable expenses. In a sense all fixed expenses are the joint expenses of producing the different units of output, while all variable expenses are specifically assignable to the different units of the product. But this analogy must not be pushed too far, and that for two reasons: (1) Most establishments with fixed and variable expenses have to accept one uniform price for the different units of their product. Their fixed charges, unlike true joint expenses, cannot be covered by the price of one portion of the output and disregarded in the price of another portion. (2) Even if an establishment is producing two or more different commodities or is able to sell one commodity in two or more different markets at different prices, its fixed expenses are not true joint expenses except in so far as its output is *necessarily* accompanied, without additional expense, by the production, or partial production, of another part of their output. The importance of this is that, as we have seen, an increase or decrease in the aggregate product of an industry must ultimately increase or decrease the fixed expenses of that industry. Fixed expenses

thus enter in the long run into the determination of the normal price of all portions of the industry's output. This is not true of joint expenses, for these affect only what we have termed the *collective* normal price of the joint products. Thus neither steaks nor hides have a separate normal price. But each standard grade or type of product in the output of the furniture industry has a normal price of its own.

The Surplus of Bargaining. — Demand and supply do not always fix price at a definite point. The price of horses of any given grade, for example, is fixed only approximately by market conditions. In the sale of a horse there is room for considerable latitude of opinion as to the price that should be paid. If the lowest price that the seller will take is considerably below the highest price that the buyer will give, just where between these limits the actual price will be finally fixed will depend upon the relative skill at bargaining of the seller and buyer. In the case of a horse trade, this opportunity for the " higgling of the market " has become proverbial, and in many other kinds of exchanges the efficient bargainer has an opportunity to get for himself a surplus above his minimum selling price, or below his maximum buying price. Real estate transactions furnish a good example. In the case of the great commodities of the world market, like wheat, cotton, and iron, the price is set so accurately by market conditions that the gains of bargaining are relatively small. *In general, the wider the market, the more general the use of the commodity, the greater the ease with which the commodity can be sorted into standard grades (as in the case of wheat and cotton), the more accurately will competitive forces fix a definite price. Goods which cannot be standardized, each unit of which possesses some unique qualities, give most scope for the variations in the valuations of individual buyers and sellers.* In such cases supply and demand do not fix a price point, but only certain limits within which the price must fall. The widening of the market, however, and the increasing standardization of commodities — an effect of machine production — are bringing a larger and larger proportion of goods into the field where uniform market valuations dominate.

Non-reproducible Goods. — Some economic writers have made a special class of such goods as great works of art. These are absolutely unique, in that no copy can have anything like the value of the original. The price of such non-reproducible goods has an upper limit fixed by the highest subjective valuation set upon it by any possible buyer. The lower limit will be either the seller's own subjective valuation, or the second highest valuation set by any competing buyer, according as one or the other of these two is the higher. Between the upper and lower limit the exact fixing of the price is a matter of pure bargaining. Such cases should not be confused with monopoly price, as has been done by some writers. The products of almost all the industrial handicrafts, as well as the products of the avowedly artistic pursuits, possess a non-reproducible element of individuality, that removes them to a greater or less extent from the operations of the law of normal price. A commodity may possess this quality of uniqueness to such an extent that it is not affected at all by the forces determining the value of the general class of goods to which it belongs, and in this case its owner may be said to have a monopoly of it. But it is better to look upon the valuations of such non-reproducible goods as determined by individual valuations and the process of bargaining. The " normal " price of such goods is simply the highest price that can be got for them — a statement which does not hold true of most monopoly goods. For monopoly goods are not necessarily unique or non-reproducible. They differ from ordinary competitive goods, however, in that they cannot be reproduced except by the monopolist.

Retail Prices. — The retail prices paid by the individual consumer do not always respond to all the variations in wholesale prices brought about by changes in supply and demand. There are sometimes tacit or explicit local price agreements between local merchants, which apply even to competitively produced goods. Some retailers consistently sell a few kinds of goods at less than cost to attract custom for the goods on which they may make a profit. Merchants who make a specialty of a high class of goods, and thus cater to a wealthy clientele, are

apt to exact higher prices for ordinary goods than do those merchants who have to deal with a poorer class of customers. Custom has more effect on retail than on wholesale prices. The prices of various articles sold as "men's furnishing goods" form a good example of the influence of custom. Retail prices are also governed by the value of the coins that are in general use, and are generally expressed in round numbers. In the long run, demand and supply govern retail prices, but they do not set a definite price point so accurately as they do in the case of wholesale prices.

Public Authority and Value. — In the Middle Ages there was considerable speculation by theologians and legists about the subject of "just price" — the value at which things ought to exchange for other things. This idea denotes an important difference between the medieval and modern concept of value. Professor Ashley has put it clearly in these words: "With Aquinas, the greatest of the medieval schoolmen, it [value] was something objective; something outside of the will of the individual purchaser or seller; something attached to the thing itself, existing whether he liked it or not, and that he ought to recognize. And as experience showed that individuals could not be trusted thus to admit the real value of things, it followed that it was the duty of the proper authorities of state, town, or gild to step in and determine it, and what the just and reasonable price really was." This "just and reasonable price" was very often thought to be that price which would afford a reasonable compensation for the labor of the producer. When in more modern times theological speculations began to yield precedence to inquiries into "natural laws," the idea of just price was supplanted by the idea of "natural price." Sometimes this was interpreted as determined by the value of the labor put into a commodity (this was the dominant idea during the eighteenth century), but the growth of capitalistic production necessitated the recognition of the other elements in the expense of producing a commodity as part of its natural price. Modern economic science, as we have seen, applies the term "normal price" to the expense of producing a thing, but interprets it

only as an important factor controlling the long-period fluctuations of market prices. The adjective "natural," with its misleading implications, has been abandoned. Yet the competitive system is today so thoroughly accepted as the "natural" economic order, that there is, as we have previously noted, a deep-seated conviction that normal competitive prices (measured by the expenses of production) are natural and just prices. This conviction is, however, brought face to face with the fact of the growth of a large industrial field in which monopoly, rather than competition, rules. The question of just price is again a live issue — as it was before the growth of the competitive system. Public authority is frequently invoked to insure that the prices fixed by holders of municipal franchises and other monopolists are just and reasonable. The chief fundamental test which our courts are able to apply to the reasonableness of any particular price is its conformity to what the price would have been under competitive conditions. Thus it is often asked if a particular monopoly charge gives a more than normal return upon the capital invested. The determination of what the expense of producing a particular commodity or service really is, is often a difficult, or even impossible, task (the distinction between constant and variable expenses being frequently a stumbling-block), but, given the general acceptance of the competitive system, it is hard to see what other standard could be used. Moreover, the general consensus of recent court decisions is that the Fifth and Fourteenth Amendments to the Federal Constitution, prohibiting the taking of property without due process of law, prevent federal and state governments from going farther than this in the regulation of monopoly charges. And even this power is not conceded, except in the case of businesses affected with a distinct public interest, such as those conducted by so-called public-service corporations. In fixing prices for its own services, such as postal charges, the government is controlled by other considerations. These will be discussed in the chapters on public finance.

Imputed Value. — The only things to which market valuations actually apply are the specific units of goods that are actually

bought and sold. We are accustomed, however, to impute these market prices to all other existing goods of the same kinds. When wheat is sixty cents a bushel, the only bushels of wheat actually valued by the market at that price are the ones actually sold at that price. Yet we impute or ascribe the same value to all other bushels of the potential supply of wheat in the same market.

Notwithstanding the hypothetical nature of this imputed value, it is often treated as though it were a real thing. Statistical attempts to state the wealth of a nation in terms of dollars and cents are only estimates of the sums of these imputed values. A merchant's inventory of his stock in trade is often accompanied by an estimate of its value. Whether this value will be realized or not depends upon the constancy of business conditions, the caprices of fashion, and whether it can be sold in the regular course of trade or whether it has to be disposed of at a forced sale. Many kinds of consumption goods, such as household furniture, are not customarily thought of by the owner in terms of exchange value. It is often necessary for purposes of taxation to ascribe value to them, but this is frequently a difficult and somewhat arbitrary process.

The Prices of Production Goods. — Throughout our analysis of exchange value it has been assumed that the commodities valued were wanted by consumers for the satisfaction of their wants; that is, that they were consumption goods. It is not altogether incorrect to say that producers' goods — capital and land — have a marginal utility, which varies with the importance attached to the possession of them. While one could thus, with substantial accuracy, include producers' goods in the scope of the foregoing analysis, there is a more instructive way of approaching the problem of the prices of land and of capital. Consumption goods have value because they satisfy human wants; that is, they yield an income of satisfactions, while production goods are valued because they have the power of gaining a money income for the owner. Just as the values of consumers' goods vary with the intensity of the wants they satisfy, so the values of producers' goods vary with their power

to yield a money income. The problem of the prices of producers' goods will, accordingly, be discussed in the chapters on the rent of land and the interest on capital.

Other Theories of Value. — The older economists used to emphasize the relation between the price of a thing and the amount or the expense of the labor spent in producing it, — a relation much closer under the old methods of hand production than it is at present. The development of a systematic labor theory of value was, however, the work of Karl Marx, the founder of modern " scientific " socialism. This theory is, in essence, that labor produces all value and that the interest on capital and the rent of land are deductions from the real wages of labor — deductions that are made possible only by the existence of the system of private property in producers' goods. It is so obvious that things do not exchange today in proportion to the amount of labor involved in producing them, that to point this out in detail, as some economists have done, is unnecessary. Karl Marx himself recognized that his " values " were not measured by the actual prices of the market. They seem to have been conceived as some mysterious essence or quality in things. But the only economic values that can be recognized from the modern scientific point of view are the values that really exist — the actual values of the market. Nor can we say that things *ought* to exchange in proportion to their labor costs, without begging the whole question in favor of the abolition of private property in land and capital. Moreover, it will be shown later that rent and interest would not be eliminated, although they might be changed in form, by a change from private to common ownership of producers' goods. Although the labor theory of value is still held by many followers of Marx, its place in the creed of scientific socialism is diminishing in importance.

The relation between price and the expenses of production has sometimes been stated in such a way as to lead to the inference that cost of production is the cause of value. The expense of production theory of price, when so stated, is open to much the same objections as the labor theory. Suppose I perfect a

machine at the expense of ten thousand dollars which will blow soap bubbles at the rate of a thousand an hour. Will it be worth ten thousand dollars? Certainly not; but why not? The theory of costs will not explain it. To say that the labor and materials have not been wisely used is simply to say that the machine has no value, which is just what we are trying to explain. As a fact, it is not worth ten thousand dollars simply because no one is willing to give ten thousand dollars for it. The expenses of production do not create value, but there is a sense in which price is the cause of the expenses of production. That is, men think it worth while to expend money in producing things because they think that the products will sell for enough to recompense them for the expenses of production.

Many of the economists who have written in the past about the subject of price took the facts of demand for granted, and devoted most of their treatment of the subject to an examination of the relation between price and the expenses of production. This was in part an expression of a general tendency to regard the production of wealth as something to be desired for its own sake; the fact that the satisfaction of human wants is the real goal of most economic efforts being underemphasized. In more recent years economic writers have developed the analysis of human wants; the fact that utility in the economic sense is not utility in general, but the utility of a particular unit of a commodity, being the most significant point in this new analysis. Some writers have even gone so far as to take the facts of supply for granted, and to assume that price is explained when marginal utility is described. As a determining cause of price, utility has a logical priority over scarcity, in the sense that demand is usually the cause of supply. Yet in the analysis of the actual price-making process we have to recognize that utility and scarcity, demand and supply, are forces operating simultaneously, neither of which can be neglected without obscuring the fundamental facts of the market.

QUESTIONS

1. Is there any relation between the price of a lead pencil and the expense of producing it?

2. What elements of a farmer's expenses are "constant"? What are "variable"?

3. What different possible standards of just price can you suggest?

4. Combine demand curves with long-period supply curves like those shown on page 175 (the general conditions of demand being assumed to be constant) and interpret the meaning of the resulting diagrams.

5. Are the passenger service and the freight service of a railway joint products?

6. What different possible meanings can be attached to the expression "natural value"?

6. Discuss the following statement:

"The fact is that labor once spent has no influence on the future value of any article; it is lost and gone forever. In commerce bygones are forever bygones; and we are always starting clear at each moment, judging the value of things with a view to future utility."—Jevons, *Theory of Political Economy*, p. 164.

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CHAPTER XII

MONOPOLY

The Idea of Monopoly. — One of the economic terms most frequently used nowadays is monopoly, and at the same time it is one of those terms which are peculiarly vague and ill-defined in popular discussion. Even in law and economics, contradictory meanings have been attached to the term, although recently there has been a marked clarification of thought both on the part of economists and jurists. While there has been confusion of thought with respect to monopoly, all have agreed that something to be called monopoly has existed, and that it has been the cause of perplexing scientific and practical problems.

In economics, as in life, categories shade off into each other, and at the boundaries discrimination is difficult. It is best, therefore, to find highly developed, plainly marked types to furnish us the subject-matter for definition and to compare one type with another. This is an especially desirable mode of procedure in the present case, because the term " monopoly " at once suggests the term " competition," with which it is inevitably contrasted. When monopoly exists, competition is thought of as absent. A state of full and free competition, on the other hand, is incompatible with monopoly.

Competition means a market with rival sellers and buyers, and prices determined, on the one hand, by efforts of sellers, acting independently of one another, to dispose of commodities and services, and on the other hand, by efforts of purchasers, acting independently of one another, to secure commodities and services. We have seen the forces that under competition limit producers and purchasers, and thus determine prices, and we have seen that competitive prices are beyond the control of any one buyer or seller.

Monopoly, as the term contrasted with competition, means combination and unified action, signifying restraint on the free offering of commodities and services by rival sellers and on the free purchase of these commodities and services by rivals who desire to secure them. The word " monopoly " itself means a condition in which there is a single seller or a single purchaser, and signifies unity in management of some kind of business in some essential particular.

The particular in which unity is secured in the case of monopoly may be in production, it may be in sales, it may be in purchases; or it may be in any two or all three of these particulars. This use of the term " monopoly " gives us a clear scientific concept which is workable; and on its basis we may then formulate this definition of monopoly: *Monopoly means that substantial unity of action on the part of one or more persons engaged in some kind of business which gives exclusive control, more particularly, although not solely, with respect to price.*

This definition of monopoly is in accordance with good English usage, and is also in harmony with the meaning given to the corresponding word in other modern languages by those who use these languages with discrimination. In legal utterances, too, though they have been contradictory and inconsistent in various particulars, we find, nevertheless, a sound tendency to emphasize unified control of business as an essential characteristic of monopoly.[1]

The Idea of Monopoly and Industrial Evolution. — But the meanings of economic categories change with industrial evolution. Even such terms as freedom and liberty have to be newly interpreted with every new stage and even with every marked

[1] Lord Coke, in the seventeenth century, said that monopoly consisted of power granted "to any person or persons, bodies politic or corporate, for the *sole* buying, selling, making, working, or using of anything, whereby any person or persons, bodies politic or corporate, are sought to be restrained of any freedom or liberty that they had before, or hindered in their lawful trade" (3 *Institutes*, 181). Blackstone, in his *Commentaries on the Laws of England*, gave almost precisely the same definition in the following century. The Supreme Court of the United States (*National Cotton Oil Co.* v. *Texas*, 197 U. S. 129) has accepted the definition of monopoly given in the text, above.

phase in a stage of economic life. Naturally monopoly has acquired a new significance, requiring new interpretation. The earlier legal definitions made monopoly proceed from an express grant of public authority. Lord Coke says: "A monopoly is an institution or allowance by the king, by his grant, commission, or otherwise"; and Blackstone uses similar language in defining monopoly "as a license or privilege allowed by the king."

Historically, this source of monopoly power is of paramount importance. From early times, English sovereigns granted monopolies either for public or private reasons, and they became a grievous burden. Queen Elizabeth, in particular, sinned in this respect, regarding the right to grant monopolies as "one of the fairest flowers" in her prerogative, and it was not long before the citizen found himself restrained and shut in on every side by a privileged class of monopolists. In 1603, it was decided, in a famous case, with respect to one of Queen Elizabeth's grants: "That it is a monopoly and against the common law. All trades as well mechanical as others which prevent idleness (the bane of the Commonwealth) and exercise men and youth in labor for the maintenance of themselves and their families, and for the increase of their substance to serve the Queen when occasion shall require are profitable for the Commonwealth, and therefore the grant to have the sole making of them is against the common law and the benefit and liberty of the subject." Parliament, in 1624, passed a statute declaring that "all monopolies are altogether contrary to the laws of this realm and are and shall be void and of no effect." Exceptions to this rule were sometimes made upon one ground or another, but the general principle of the illegality of special grants of monopoly became thoroughly established in English law.

Our forefathers were so deeply impressed with the evils which they had suffered at the hands of the monopolists in old England that in the Bills of Rights and elsewhere in the early constitutions of our commonwealths they frequently inserted severe denunciations of monopolies, and prohibited them unqualifiedly; and these declarations and prohibitions still last in several states.

Two illustrations will suffice. We read the following utterance in Article 39 of the Declaration of Rights which forms part of the constitution of Maryland: "Monopolies are odious, contrary to the spirit of a free government and the principles of commerce, and ought not to be suffered." And the people of Texas still cherish Section 26 of Article 1 of their constitution, which among other things declares that "monopolies are contrary to the genius of a free government, and shall never be allowed."

While the spirit of monopoly is as old as man, there was until this century comparatively little opportunity for monopoly on any large scale save as it proceeded from express grants of public authority. These grants were sometimes made for public purposes, and sometimes they proceeded from mere abuse of monarchical power, and were given to favorites of royalty. We cannot now stop to discuss their merits and demerits, but call attention to the fact that they became odious, and were prohibited both in England and in this country, exception being made of patents and copyrights. At the present time, however, monopolies proceed from the nature of industrial society, and are of far greater significance in our economic and political life than ever before. The really serious monopolies of our day are far more subtle, and have for the most part grown up outside of the law, and even in spite of the law. Framed with a view to only one kind of monopoly, our law was at first wholly inadequate to cope with these new and varied manifestations of monopoly.[1]

Things Sometimes Confused with Monopoly. — We must distinguish sharply between a condition of monopoly and other conditions, if we are to think clearly and accurately. One thing which does not yield monopoly is mere limitation of supply,

[1] Modern industrial monopolies are often quite as much akin to the offense known in the old English law as "engrossing" as they are to the old notion of a monopoly granted as a special privilege. The engrosser was one who bought large stocks of goods in a market or on their way to a market with the purpose of selling them later at a higher price. The opposition to engrossing seems to have been based partly on hostility to unnecessary middlemen and partly on the fear of temporary monopolies, created by "cornering the market." Later, the terms engrossing and monopolizing came to be generally used as synonymous in court decisions.

and it is strange that even an economist of the ability of John Stuart Mill should have found the essential feature of monopoly in this limitation; for this at once makes monopoly cover the entire field of economic activity, inasmuch as economic activity is for the acquisition of valuable things, and things lack value whenever their supply is adequate for the satisfaction of all wants. It is only things limited in proportion to human desires that have exchange value.

Nor may we say that a valuable thing is monopolized because its supply is limited and also graded in quality. Land exists in quantities to which physical nature has assigned limits, and the supply of land exists in grades varying in fertility and desirability of situation, and as a consequence of this limitation and gradation we have the rent of land. Land is not, however, a monopoly, and it is misleading to speak of it as a natural monopoly. Nowhere do we find monopoly either in the ownership or in the cultivation of land, but everywhere competition — competition among unequals, to be sure, but still competition.

Land rent is a differential gain, a gain due to the superiority of the land owned by rent receivers over that cultivated by those who are making use of land which affords nothing beyond returns to labor and to capital. We must distinguish between the broad concept of differential gains enjoyed by those in competitive pursuits, and the monopolistic gains which are based on the absence of competition.

Just as sharply must we distinguish between competitive businesses of large magnitude and monopolies. Department stores in no city in the world enjoy monopolies, but are subjected to the steady, permanent pressure of competition. There are those who call every business operating on a vast scale monopoly, and would put in the same economic category a gasworks without a competitor and a huge retail dry-goods establishment with rivals at every hand, ready to seize every opportunity for an advantage over it, and certain to ruin it if its managers relax their intense activity and watchfulness.

Classification and Causes of Monopolies. — Monopoly appears to-day in so many different forms and results from so many

different causes that the classification of monopolies is a necessary preliminary to clear thinking in this field.

In the first place, we must note that there are (1) *public* monopolies, owned and operated by some political unit, for the benefit of the community, and (2) *private* monopolies, owned by private persons, firms, or corporations, and operated primarily for their own benefit.

In the second place, monopolies may be (1) *local*, (2) *national*, or (3) *international*. This classification is more or less arbitrary, but it suggests that the *area* of the operation of a monopoly is a matter of much importance. There may be only one seller of shoes on a particular street or in a particular building. We do not call this monopoly, because the area in which this shoe dealer is without competitors is much smaller than the area in which the forces which fix the retail price of shoes operate. It is not sufficient that one should be the only seller or buyer in a certain definite area. For monopoly to exist it is necessary that the unified control of the buying or selling of a particular commodity or service should extend throughout the area of the *market*, whatever that area may happen to be. The supply of gas, or of street railway transportation, is in most cities a real monopoly, because the market in such cases is merely local. Two young men in Chicago some years ago cornered the market on eggs, and thereby cleared $15,000. The weather was so cold that eggs could not be shipped to the city, and thus the speculators had a temporary local monopoly. A protective tariff or other impediments to international trade may sometimes enable a monopoly to exist in one country when the same article or service is not monopolized in another country. Various attempts have been made to establish international monopolies, but none of these has been entirely successful. Agreements restricting competition between the producers of different nations are known to have been effected in the steel trade and in the petroleum trade.

We pass now to a third classification of monopolies, according to the *source of monopoly power*. This classification is especially important, because we shall not know how to deal effectively

with monopolies until we understand just why and how the different kinds of monopolies have come into being.

A. Social Monopolies.

I. General welfare monopolies.

1. Patents.
2. Copyrights.
3. Public consumption monopolies.
4. Fiscal monopolies.

II. Special privilege monopolies.

1. Those based on public favoritism.
2. Those based on private favoritism.

B. Natural Monopolies.

I. Those arising from limitation of supply of raw material.

II. Those arising from secrecy.

III. Those arising from peculiar properties inherent in the business.

Social Monopolies. — Businesses are social monopolies[1] *when they are made monopolies not by their own inherent properties, but either by legislative enactment or by special advantages or privileges granted to them by other monopolies.*

Social monopolies cannot exist without the acquiescence of society. There is no reason, therefore, why social monopolies should be permitted, except in so far as particular social monopolies are deemed to be advantageous means of achieving socially desirable ends.

The exclusive privileges conferred (for limited periods) by *patent* and *copyright* laws are justified by the stimulus they have given to invention and authorship. Patents lead to several different kinds of monopolies. In some instances the monopoly is limited to the control of the supply of the patented article itself. In other cases the use of a patented machine or process in the manufacture of some other product may give advantages important enough to create a monopoly in the supply of that product. Sometimes the owner of a patent endeavors to extend the scope of his monopoly by refusing to sell his patented prod-

[1] Sometimes called "artificial monopolies."

ucts except on the condition that other commodities, used in connection with the patented product, be purchased from him and not from his competitors. Such agreements have been enforced in the sale of mimeographs and of shoe machinery. These "tying contracts" were made illegal by the Clayton Anti-Trust Act of 1914. Again, the patent system sometimes operates so as to perpetuate a monopoly already established. Some new inventions cannot be profitably utilized except in connection with machines or processes which have previously been patented. For this and other reasons it frequently happens that an existing monopoly affords the only market for the improved machines and processes adapted to some particular industry. This has been an important factor in the telegraph, telephone, and electrical industries. But although our patent laws need careful revision,[1] the policy of granting inventors a temporary monopoly continues to meet with general social approval. Copyrights stand upon even firmer ground. To do away with copyrights would not only lessen the incentives to authorship, but it would also prevent the publication of many good books.

Trademarks, like patents, are monopolies in the strictly legal sense that no one else may use them. But, unlike patents, they do not lead to a monopoly in the economic sense of giving exclusive control of one sort of business. They are used largely in competitive business undertakings as a help in establishing and maintaining what is termed good-will. The law also forbids the fraudulent imitation of established brands, firm names, and distinctive forms of packages. In so far as a successful business man in a competitive field is able to induce people to believe that it is better to purchase his particular brand of goods than to take the chance of getting a possibly inferior quality by purchasing his competitor's products, he may be able to lift himself a little above the "dead level" of competition. He may even find that he can increase his net profits by putting the price of his goods somewhat higher than that at which precisely similar goods are sold in the market. By thus successfully marking off his product as something distinct from and possibly superior to his competitor's goods, he is able to obtain what might be termed a quasi-monopoly. But because his power to control the price of his product is in general much more limited than that of the true monopolist, and because competition limits and conditions his activities in other ways, his business is more properly called competitive than monopolistic.

[1] See p. 23, above.

Public consumption monopolies and *fiscal monopolies* are to be distinguished the one from the other only by the object which the government has in view in establishing them. If the government manages for itself or grants to another a monopoly of the liquor traffic with the object of regulating the consumption, the monopoly is a public consumption monopoly. If, on the other hand, the chief object is not regulation, but revenue for the government, the monopoly is a fiscal one. Often the two objects are blended. The production of salt has at one time or another been a fiscal monopoly in many different countries. The sale of tobacco is a fiscal monopoly in France. In recent years Japan has established a number of fiscal monopolies.

The old monopolies established by special grant of the sovereign were in some cases fiscal monopolies, a heavy tax or royalty being paid by the monopolist. In other cases, however, they were based merely on *public favoritism*. A monopoly in one country, protected by a high tariff from the competition of producers in other countries, is rightly said to be based, so far as all or part of its monopoly power is concerned, on public favoritism. Monopolies based on *private favoritism* derive their monopoly power from special advantages granted them by other monopolies, especially natural monopolies. Railroad rebates have been in the past a fruitful source of monopoly.

Natural Monopolies. — These *depend for their existence on natural forces as distinguished from social arrangements.* They grow up independently of man's will and desire and sometimes even in direct opposition to it. The words we have used to designate the first two classes of natural monopolies are self-explanatory. Natural mineral waters and certain wines made from grapes that are grown only in restricted areas are often good examples of monopolies derived from *special limitations in the supply of raw materials.*

The Kimberley mines, of South Africa, virtually controlling the amount of annual additions the world's stock of diamonds, constitute a monopoly of this class. The limited area in which anthracite coal is produced in the United States is an important contributing cause of the monopolistic control of that industry.

Monopolies based on *secrecy* are no longer of great importance, although the use of secret processes remains in some instances a source of monopoly.

By far the most important of all monopolies are natural monopolies of the third class, arising from peculiar *properties inherent in the business*. Among such monopolies are roads and streets, canals, docks, bridges and ferries, waterways, harbors, lighthouses, railways, telegraphs, the post office, electric lighting, waterworks, gas works, and street railways of all kinds. What are the properties inherent in such businesses that make them naturally monopolistic? In some instances it will be found that the possession of peculiarly favorable spots or lines of land may give advantages important enough to create monopoly. This may be true, for example, of harbors, docks, street railways, rights of way through mountain passes or along narrow river valleys, and railway terminals in large cities. Often these are things which cannot be duplicated at all or can be duplicated only at a practically prohibitive expense. Monopolies created by the presence of such conditions are similar to natural monopolies of the first class.

Natural monopolies of this third class are, however, more often rooted in *conditions that make competition self-destructive*. These conditions are three in number, and the presence of all of them is generally necessary to create monopoly: (1) The commodity or service rendered must be of such a nature that a small difference in price will lead buyers to purchase from one producer rather than from another. (2) The business must be of such a nature as to make the creation of a large number of competitive plants impossible. Either because the business is one in which special advantages attach to large-scale production or because there are actual physical difficulties in the way of the multiplication of competing plants, there must be fairly definite limits to the possible increase of the number of plants among which the business might be divided. (3) The proportion of fixed to variable expenses of production must be high.

These conditions, the reader will note, are conspicuously present in the operation of railways and of the so-called local

public utilities, as well as in other industries in which natural monopoly prevails. The principal reason why competition cannot be maintained in this field is that under the conditions we have listed *competition fails to fix a normal price* remunerative enough to attract the recurrently necessary fresh investments of capital. Competition succeeds when either, first, the expenses of production are largely variable expenses, or, second, the total output of the industry comes from a large number of competing business units, some successful, others, very likely, operating on the narrowest possible margin of profits. When either of these two conditions is present in an industry, the aggregate amount of the output will be delicately sensitive to changes in market price. If the price rises, the output will be increased; if it falls, the total output, and with it the total expenses of production, will be diminished. In either event the change in price will be checked, and through this process, market prices will, in the long run, be kept just about high enough to induce the industry to maintain an output of whatever size may be justified by the demand for it. That is, the forces which fix a *normal price* will operate effectively.

But if there are, at the most, only relatively few competing establishments in an industry, if fixed expenses are relatively large as compared with variable expenses, and if the market for the commodity or service produced is quick to take advantage of price cutting on the part of one or more of the establishments, it will be difficult to maintain competitive conditions. What would happen if one of the railways running between Chicago and New York should reduce its freight rates? First, it would immediately get a large share of the traffic. Second, the other railways would be forced to lower their rates, so that if the first railway desired to retain its increased traffic it would be forced to cut rates again. Third, it is clear that there is no stopping point in this process of competitive rate cutting, so long as the rates suffice to cover *variable expenses*. Fourth, since fixed expenses must, however, be paid, the competing railroads have to choose between (*a*) ultimate bankruptcy, and (*b*) the maintenance of rates at a level fixed by joint agreement. This second

alternative means unity of action, or monopoly. Where competition is thus self-destructive, monopoly is inevitable. The operation of this principle has been exemplified many times in the history of American railways. A new "competing" railroad has been built, it has cut rates to attract a share of the traffic; a rate war has ensued; and the end has always been monoply in the form of a combination or rate agreement. A similar situation is found in the case of local public service companies. Twenty or thirty years ago many of our cities adopted the mistaken policy of trying to force competition into this naturally competitive field. But very often it was found that the mere threat of competition was sufficient to bring about combination and monopoly.

It is believed by some that the advantages of large-scale production increase so long as the size of the business establishment increases. If this were true, it would give production on the largest possible scale advantages so great that monopoly would result in all parts of the industrial field. Some socialists believe that this movement is so strong that it must result in the final disappearance of competition and the triumph of monopoly everywhere. Certain other students of the problem think that it is only in certain industries that the economies of large-scale production are sufficient to lead to monopoly. But in such fields, they hold, "capitalistic monopolies" are sure to appear.

It should be remembered, however, that the very large business establishment has disadvantages as well as advantages; and it seems probable that beyond a certain point the disadvantages of a further increase in size grow more rapidly than the advantages. In most industries the point of maximum efficiency is reached long before the point of monopoly is reached. It is difficult, and perhaps impossible, to find a single instance of successful monopoly in which one or more of the definite and specific sources of monopoly, mentioned in the foregoing classification, are not to be found. Our conclusion, then, may be stated as follows: There is a great and growing field of industry in which competition is not natural or permanently possible; there is another field within which monopoly does not exist, and in which it cannot exist except in the form of social (or artificial) monopolies.

Monopoly Price. — The chief peculiarity of monopoly price is found in the power of the monopolist over supply. This is what gives the monopolist the ability to secure surplus profits. In competitive industry the supply is not within the control of a

single producer, and, as a result, prices tend to be controlled or limited by the expenses of production. The competitive producer cannot increase his profits by limiting the supply, and it is on this account that the law regards competition as one of the main pillars of our present social order.

The monopolist will normally endeavor to fix his output at such a point that, given the existing state of demand, he will secure the *highest possible net returns*. On the one hand he has to face the fact that although he can increase his gross receipts up to a certain point, by increasing his output, yet the increase in gross receipts will not be proportionate to the increase in output, for the simple reason that the increased output will not find buyers except at a lower price per unit. On the other hand an increase in his output will always increase his aggregate expenses of production, although here again the increase (in expense) may not be proportionate to the increase in output. In particular there are likely to be some permanently fixed expenses which will be the same for a small output as a large one, and there may be other expenses which will not increase unless the output should be made much larger than would be profitable. In fact, it may often happen that the fact that a large output would make it necessary to increase certain expenses which would otherwise be fixed (such as the cost of the plant) may lead the monopolist to choose to produce a relatively small quantity of goods. The following table shows in parallel columns the number of sales of a monopolized good at different prices, the total resultant receipts, the variable expenses, the fixed expenses, the total expenses, and, finally, the net revenue or monopoly profit. For the sake of simplicity it is assumed that all of the fixed expenses are permanently constant, at least for such possible increase of output as the monopolist cares to consider.

Study of the table will show that, in the case assumed here, the monopoly price will stand at six cents. It would be possible for the monopolist to produce 5,500,000 units, for this would give him a net profit of $5000. But since he can control the supply, he will limit his output to 2,500,000 units, giving him the maximum net return, $25,000.

Price per Unit	Number Sales	Total Earnings	Variable Expenses per Unit	Total Variable Expenses	Fixed Expenses	Total Expenses	Net Renenue
$.10	600,000	$ 60,000	$.03	$ 18,000	$50,000	$ 68,000	−$8,000
.09	800,000	72,000	.03	24,000	50,000	74,000	− 2,000
.08	1,200,000	96,000	.03	36,000	50,000	86,000	+10,000
.07	1,800,000	126,000	.03	54,000	50,000	104.000	+22,000
.06	2,500,000	150,000	.03	75,000	50,000	125,000	+25,000
.05	3,500,000	175,000	.03	105,000	50,000	155,000	+20,000
.04	5,500,000	220,000	.03	165,000	50,000	215,000	+ 5,000

But the case assumed here is in many ways far simpler than the cases presented by real life. The monopolist may not be able easily to hit upon just the price that will yield maximum net profits. He may, by experimenting a little, approach more closely to it, but at best he can hardly hope to reach more than an approximate maximum. Or it may be that the monopoly is one in which the price is fixed by custom or convenience (as is in some measure true of street railway transportation), so that the monopolist can vary only the quality of the commodity or service he sells at the established price. Moreover, it should be noted that the price most profitable for the present may not prove the most profitable price in the long run. The monopolist may choose to forego some of his possible profits this year in order to extend the field of demand for his product and to lay the foundation of a long-continuing period of profitable production. Furthermore, in view of the possibility of the public regulation or public ownership of his business, he may deem it expedient not to arouse public hostility, and so may decide to sell at a price lower than what would, for the time being, be the most profitable price.

The Effect of a Tax. — Our numerical illustration may be made to convey a lesson regarding the influence of taxation upon monopolies and monopoly price. Fixed expenses have no influence in determining the price. If, therefore, a fixed tax, say of $5000 a year, were to be laid upon this monopoly, it would not result in an increase of price. A study of the table will show

that with such a tax the net revenue at price .08 would be $5000; at price .07, $17,000; at price .06, $20,000; at price .05, $15,000; at price .04, nothing. Thus price .06 will still be the point of maximum net revenue, and hence the monopoly price. On the other hand, a variable tax, for instance a tax of one cent per unit, would result in this case in raising the monopoly price. In our illustration, such a tax would make the net revenue at the price .08, — $2000; at the price .07, $4000; at the price .06, nothing; at the price .05, — $15,000. Thus, though the monopoly would find its profits greatly curtailed by such a tax, consumers would be compelled to pay one cent more per unit for the monopoly product. The possible advantage which society might draw from the tax would therefore be wholly or in part offset by the increased cost of the commodity. We may conclude, therefore, that fixed taxes, or taxes on the net revenue of a monopoly, cannot be shifted wholly or in part by a change in price; while taxes laid in proportion to the amount of business, since they contribute an addition to the variable expenses, may be wholly or in part shifted by a change in price.

Relation of Demand to Monopoly Price. — There are certain conditions on the side of demand which have a decisive influence in determining monopoly price. The most important of these is the degree of elasticity of the demand for the monopoly product. *The more inelastic the demand for the monopolized commodity or service, the higher will be the monopoly price which will yield the greatest net returns.* If a commodity is a necessity of life, and is so habitually consumed that people cling with intensity to it, monopoly will, other things being equal, be more profitable than if the commodity were one which consumers thought they could easily dispense with. This helps to explain why salt and tobacco have been chosen as fit objects for public fiscal monopolies. The more adequate the substitutes for a commodity, the smaller will be the opportunity for surplus profits which a monopoly of that commodity will give. Finally, the higher the general average of economic well-being, and the more readily money is generally expended, the higher will be the monopoly price which will yield the largest net returns.

Thus monopoly, without any effort of its own, shares in the increasing wealth of a country, and absorbs a considerable part of it. It is, for example, among other influences, the larger wealth per capita and the greater willingness to spend freely that makes monopoly more profitable in the United States than in Germany or other European countries.

Class Price. — Thus far we have assumed that the monopolist charges one uniform price and sets the price at the point which yields him the largest net returns. But it is obvious that his gains will be increased if he is able to vary his price. His gains would be highest if he could charge *each individual* that price which would yield the largest net returns, taking into account the number of sales and profits on each. A rich man might pay double the current rates for gas or electric light without diminishing his consumption in the least. But in the case of any large modern business it is obviously impracticable to fix a price for each individual, even were there no legal difficulties in the way, as there are in the case of the great monopolistic businesses such as gas and electric lighting and railway transportation. The next best thing for the monopolist is to divide his public into classes, and to charge to each class that price which will yield the largest net returns. In the table already given, we found that six cents was the monopoly price on the hypothesis of one uniform price, but obviously, if the eight-cent and seven-cent prices could be secured, and six cents reserved as a price for sales that could not be made at eight or seven cents, the profits would be still higher. This gives rise to what, in its broad, general terms, we call *class price*. The monopolist seeks in every possible way to divide his community into classes and to secure from each the highest possible price. We observe a remarkable development of class price in the case of our railways; and, unless legal obstacles are interposed, this development will doubtless go still farther. We have special trains with an extra charge. We have privately owned railway coaches; our drawing-rooms and single seats in "parlor cars"; our ordinary first-class tickets; and our second-class tickets, the purchasers of which frequently ride in the "day coach" with the first-class passen-

gers. Then we have single tickets, fifty-trip family tickets, monthly commutation tickets, etc., with enormous variations in price. We may go farther and say that the American railway rate system of "charging what the traffic will bear" is a consummate example of monopoly prices.

Nor need it be supposed that in all its ramifications class price is a bad thing. It is, when ignorance and need are exploited by a special high price; frequently it works well when an attempt is made to reach a class of limited means with a very low price, as in the case of early and late workingmen's trains, etc.

Monopoly price will vary with *use* also; and this is one special subhead under class price, and may be designated as *use price.* The typical instance is that of two prices sometimes charged for gas: a higher when it is used for illuminating purposes; a lower when it is used for fuel.

Monopoly Price High Price. — It is often said, and frequently even in judicial decisions, that the monopolist can charge any price that he pleases. We have already seen that this is not the case. The law of monopoly price shows that the price, even in the case of monopoly, is determined by economic forces. It is conceivable that there may be cases in which monopoly price will exactly coincide with competitive price, although the probabilities would be against a frequent coincidence of this kind. There are also cases where monopoly price may be even lower than competitive price. If a monopolist should be able to effect great savings as compared with the expense of doing business under competition, it could happen, in theory, that the price which would yield the largest net returns would be a lower price than would be possible under competition. Probably, and in fact almost certainly, under a condition of competition, letters could not be carried as cheaply as they are.

Generally there are strong reasons for the position that monopoly price is high price. Monopoly is formed for the sake of gain. Gain may be secured in two ways by monopoly: first, through economies of production; and it is alleged by trust promoters that these economies are a chief motive in their activity. There are some gains of this kind, but what their magnitude

may be in a particular case is highly uncertain. When we compare a monopolistic business with a competitive business organized on such a scale as to secure the maximum of efficiency, the gains of competition in alertness and inventiveness, stimulated by rivalry, have recently been too little considered.

The principal source of gain in monopoly is found in the ability to get a high price. In confirmation of the position that monopoly price is high price, we may refer to history, the utterances of which seem to be clear and distinct. At any rate, there can be no doubt that, in the opinion of historians who have treated the subject, monopoly means high price. Hume, in his treatment of monopoly in his *History of England*, speaks of the price of monopolized articles as exorbitant, and cites the price of salt, the price of which had been raised by monopoly tenfold and even more. It is generally conceded that in most cases of a government monopoly of the production or sale of salt the price has been so extremely high as to be a real popular grievance; and it is generally necessary to inflict severe penalties to prevent the people from securing the salt at a lower price from non-authorized sources. But of still greater significance are the results of the investigations of the Industrial Commission of the United States. It was there made evident that when monopoly appears in a form at all clear and well defined, the tendency is plain to increase the margin between the prices of finished products and raw materials.[1]

The courts of the world have made it clear in their judicial utterances that they regard monopoly price as high price; and, as their opinions are based upon cases actually brought before them, we cannot do otherwise than attach great importance to their view.

Wherever commissions have been formed with power to regulate monopoly price, and these commissions have been comprised of independent and strong men, there has been a marked tendency to reduce monopoly price; because unregulated monop-

[1] See report by Professor J. W. Jenks on "Industrial Combinations and Prices," *Report of the Industrial Commission*, Vol. i, pp. 39–57; and also the same author's work, *The Trust Problem*, Chap. viii.

oly price has very often been found to be excessive and unjust. The opinions of the Railroad Rate Commission of Wisconsin afford many illustrations. This Commission has authorized a higher price in a few cases, but generally has been forced to lower prices, although in a notable case of passenger rates it did not go so far as the legislature subsequently did. The same statement holds true in large measure of the decisions of other state public utility commissions and of the Interstate Commerce Commission.

Monopolies and the Distribution of Wealth. — We have not the precise statistical data which will enable us to state the exact influence of monopoly upon the distribution of wealth. We have, however, sufficient data to warrant the opinion that the high monopoly prices and the gains resulting from the exclusive position of the monopolist give us a large privileged class in countries of modern civilization, and especially in the United States. Even when the increment of price is comparatively small, it has large significance in the case of the sale of a vast number of units of services or commodities. The difference between a four-cent street-car fare and a five-cent street-car fare may not appear to be great, but it is a difference of 25 per cent and leads to an enormous difference in earnings.

All the many investigations that have been made recently in various lines of business (especially in railways, the beef industry, the steel industry, coal mining, etc.) point to monopoly as a prime cause of the so-called swollen fortunes of this country. In this and other countries some histories of families distinguished for wealth have been written, and probably few if any cases could be found in which some monopoly element had not entered. Various lists of rich men have been published, among them one published by the *New York Sun* in 1855, and one published by the *New York Tribune* in 1892. These lists cannot by any means be presumed to be accurate, and yet they do afford very considerable evidence of the sources of large fortunes, and point to monopoly as a prime source of the enormous fortunes of today. This is a subject which in itself would require a larger book than the present one for adequate treat-

ment. The student should attempt by observation and study to carry forward the lines of investigation and thought here suggested.

Public Policy with Respect to Monopolies. — As many monopolies have come as a result of underlying laws of industrial evolution, they cannot all be abolished. Experience, and the analysis of industries like railways, gas works, etc., falling under the head of "public utilities," so called, should be conclusive. We must have monopoly in these cases, and the only question we are concerned with is, "What kind of monopolies shall we have?" We must admit that unregulated monopolies in private hands have always been odious and are opposed to the principles of the laws of civilized nations. They are opposed to that endeavor to secure equality of opportunity which is fundamental in modern democracy and which manifests itself as a red thread running through American history. Even George Washington, generally looked upon as calm and self-contained, denounced monopolizers and wished they might be "hunted down as pests of society" and "hanged on a gallows five times higher than the one prepared for Haman."[1] It is not so much high price that disturbs the modern man as it is inequality of opportunity; and this general sentiment has been very clearly and forcibly expressed in court decisions. In the field in which monopoly is natural and inevitable, therefore, we cannot permit unregulated special privilege, and to this end we must choose between public monopoly — government ownership — and public control of monopolies privately owned and operated. This opens up so vast a subject for discussion that we cannot enter into it here. It should be noted, however, that the considerations which must govern our choice differ for different types of natural monopolies. Municipal waterworks and the federal post office are in most respects efficiently and successfully managed. But in the case of many other natural monopolies the problems of management are more complex and difficult in many ways. Just now the method of public *control* rather than of public ownership is beginning to be given a thorough test. Our policy in the future

[1] C. J. Bullock, *Essays on the Monetary History of the United States*, p. 67.

will undoubtedly be determined in large measure by the results of that test. Public control, to secure equality of opportunity, must so regulate monopolies and limit price that the gains will be no higher than those produced by equally wise investments and equally wise and prudent management in the field of competition.[1] Sometimes it is stated that owners of railways and other monopolistic enterprises should have a competitive return upon all the money that they have invested. This would give them a position of special privilege, inasmuch as in the competitive field a great deal of money is lost. It is only wise investment and careful management in the field of competition that can secure returns equal or superior to the current rates of interest. Imprudently invested capital is lost in the field of competition; and when it is imprudently and unwisely invested in the field of monopoly, it cannot justly claim any return.

When we turn to the field of social monopolies we find that the problems of public control are simpler, but more diverse. These monopolies exist only by the approval or tolerance of society, and each particular one can be judged on its own merits. The problem of social monopolies, therefore, resolves itself into such problems as those of the economic effects of the patent system, the best way of controlling the consumption of liquors and other harmful commodities, and the most expedient means of raising public revenues. With respect to one class of social

[1] This does not mean that in the case of old enterprises price must always be so reduced that the gains shall yield a competitive return only on the physical value of a plant. The principle of vested rights or interests has to be given a certain rôle. These have often been created by society rather than by private persons, and faith must be kept. In the case of railways and the telegraph, the American nation and states have deliberately encouraged a wasteful policy of competition which is in large measure responsible for high capitalization. It would not be right to place upon holders of these properties all the burdens of a mistaken public policy in the past. What is needed is to declare a public policy for the future and to base returns for the future upon future actual investments in the case of public utilities. In any case, our federal and state governments are acting wisely in insisting upon physical valuations of railways, gas works, and other similar monopolies as a help in determining fair prices for present and future. Now and here we can do no more than to throw out these suggestions in regard to a pressing present problem of great magnitude. A further discussion of some aspects of the problem will be found in Chap. XXVII (Transportation).

monopolies society has reached a very definite conclusion: There must be no needless extension of the field of monopoly through either public or private favoritism. The possibility of obtaining monopoly through special privilege is clearly inconsistent with the maintenance of equal opportunity in the industrial field.

The problem of the public control of monopoly is sometimes confused with the "trust problem" — the problem of the public control of large industrial combination. But the trust problem is only in part a problem of monopoly. It will be discussed in the following chapter.

QUESTIONS AND EXERCISES

1. Has bigness anything to do with monopoly? Do you know any small business which is a monopoly? Do you know any very large business which is keenly competitive? Contrast a state of competition with a state of monopoly.
2. Define monopoly and discuss each point in the definition.
3. Contrast land ownership with monopoly.
4. Explain the importance of classification of monopolies, and especially of distinguishing between private and public monopolies, and social and natural monopolies.
5. State the main classes of monopolies, and give the divisions and subdivisions in each class.
6. A public tobacco monopoly exists in France and produces large revenues. The business is generally said to be well managed. Do you see any benefits that would accrue from the establishment of such a monopoly in the United States? any evil effects?
7. Define monopoly price and show how it is determined.
8. What does class price mean? Explain use price.
9. Why do we think of monopoly price as high price? Do you know any monopoly price which is a low price? What do you mean by high price? by low price?
10. What relation has monopoly to large fortunes? to small fortunes? What, if any, to poverty?
11. What is the best public policy with respect to monopolies?

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CHAPTER XIII

BUSINESS ORGANIZATION

The Meaning of "Business." — The dominance of "business" in our present social economy is so familiar and commonplace a thing that we are apt to forget its real significance. "Business" means profit seeking. It does not cover so broad a field as does "production," nor is it quite the same thing as "production for the market." Business is acquisitive rather than productive, and while acquisition usually involves production, this is not invariably the case. Business operations consist, fundamentally, in buying or hiring things and in selling them or using them for the purpose of gaining a profit. Among the things thus bought or hired are land, labor, capital goods, and business privileges or advantages, such as franchises, patents, copyrights, and "good-will." The economic world, in its business aspect, is a world of buying and selling rather than of making and using things; it is a world in which prices, expenses, debts and credits, and contractual relations are the dominating things rather than the technical processes of production or the ultimate costs of production as measured in human effort and sacrifice. Commerce and manufactures have each in turn been brought under the dominion of business enterprise; business methods and motives are also of the first importance in agriculture, although in this last field production for home use continues hand in hand with production for profit.

The Nature of Business Units. — The business world is made up of profit-seeking units, — entrepreneurial units. We are apt to think of business units as composed of individual men or groups of men. In an ultimate sense this is not incorrect, but for present purposes we may more profitably view business units

as merely the centers or *foci* of the contractual and other relations that bind the business world together. These relations are recorded and stated more or less fully in the accounts of each business unit; ultimately, however, they are matters of legal fact, and, as we shall see, the *legal* aspect and the *accounting* aspect of these relations are not always identical.

The Business Unit in Accounting. — The simplest general way in which a business unit can be described by its accounts is by means of the *balance sheet*, which is the statement of the assets or resources and the liabilities or obligations of the business unit as they exist at a particular time. The following is a simplified form of balance sheet for a small manufacturing establishment:

Assets		Liabilities	
Land and buildings	$190,000	Original capital invested	$200,000
Machinery and fixtures	50,000	Income reinvested	70,000
Raw materials, goods in process, and finished goods on hand	40,000	Accounts payable	20,000
Accounts receivable	28,000	Profits	25,000
Cash on hand and in banks	7,000		
Total assets	$315,000	Total liabilities	$315,000

The itemized assets explain themselves, but the meaning of the various liabilities may not be so clear. In this statement all the items of the liabilities except " accounts payable " are liabilities of the business unit, conceived as a separate thing, to its owner or owners, — the amount which would be left if the business were sold as a whole at a price just equal to the total estimated value of the assets minus the actual outstanding obligations (the accounts payable).[1] It will be noted that the item called " profits " is the variable by which the account is balanced.

[1] The form of balance sheet given in the text is a simple adaptation of the kind of balance sheet used in the published statements of corporation accounting. But if the individual proprietor of a small business keeps an accurate ledger account with himself, the result is the same so far as the independence of the business as an accounting unit is concerned.

On such a showing as this the owners might decide to take $5000 out of the business as dividends, or personal profits, as the case may be. This would reduce the "cash" to $2000 and correspondingly reduce "profits." They might decide, also, permanently to retain $10,000 of their earnings in the business. "Profits" would then be reduced to $15,000, and the "income reinvested" would be increased to $80,000. In the case of corporations the "original investment" item is called "capital" and represents the par or nominal value of the corporation's stocks and bonds, whether or not the corporation has received this amount in return for them. Surplus profits in such cases can be easily converted into "capital" by means of "stock dividends."

The business unit is pictured in the balance sheet as the owner of various kinds of valuable property and of valuable claims against those indebted to it. But on the other hand, as the balance sheet also shows, there are rights or claims of equal amount *against* the business unit on the part of its own creditors and proprietors. The liabilities side of the balance sheet shows how the ultimate rights or equities in the property and credits shown as assets are distributed among creditors and proprietors. The business unit, as a thing apart from its proprietors, has only an imaginary existence. But it is convenient to think of it as having valuable rights or assets of its own, and to think of the claims against these rights as being *distributed* in the form of obligations or liabilities. This explains the statement that business units are the centers or *foci* of business relations.

In its *legal aspect*, however, the business does not always have so distinct a unity of its own. This varies with the form of business organization, of which there are three important types: the individual entrepreneur, the partnership, and the corporation.

The Individual Entrepreneur. — Any individual may set himself up as a business man, an entrepreneur, without any legal formality other than the payment of the license fee which most states impose on some kinds of business undertakings, such as liquor dealing, and which some states, especially in the South, impose upon many kinds of undertakings. The individual entrepreneur still dominates the field in agriculture, in small retail trade, and in local " shop industries."

In the legal aspect the obligations of a business conducted by an individual entrepreneur are the personal obligations of the entrepreneur. All of his possessions — of whatever kind [1] — are jeopardized by his business risks. If the entrepreneur conducts two distinct business undertakings, the assets of one may be seized, if necessary, to secure the liabilities of the other. The personal liability of the individual entrepreneur is accordingly said to be *unlimited*. The usefulness of this kind of business organization is limited, obviously, to small undertakings, where the capital and credit of the individual man are adequate.

Partnerships. — A " firm " or partnership represents a joint undertaking by individual entrepreneurs. Partnerships are most common in mercantile undertakings of moderate size, in small manufacturing establishments, and in the professions. This joining of interests makes larger undertakings possible, but relatively increases the personal liability of the individual members of the firm. For each member is personally liable for all of the obligations contracted by the firm, including those contracted in the ordinary course of business by any other one member of the firm.[2] The partners may have a contract binding among themselves as to their respective contributions (of money or time), shares in profits, and liabilities. But a member released from personal liability by an agreement of this kind is still liable for all obligations incurred by the firm. The agreement only gives a basis for instituting legal proceedings to recover the amount of his personal losses from the other members of the firm.

Aside from (1) the excessive personal liability involved, the partnership is open to objection from the business man's point

[1] The "exemption laws" of some states constitute an exception which does not affect the principle involved.

[2] This refers to the status of the ordinary partnership under common law. The statutes of most of the states provide for a special form of *limited partnership*, in which one or more of the partners are *special partners*, who are not personally liable, save for their investment in the business, and who are allowed to take no active part in the management of the business. In a few states there is a special form called a *limited partnership association*, in which the liability of all the partners is limited. These are practically joint-stock companies with non-transferable shares. The *partnership in commendam*, which still exists in Louisiana as a heritage of the civil law, is essentially like the statutory limited partnerships of other states.

of view, because: (2) It is impossible for a partner to retire from a firm without dissolving the partnership and, possibly, breaking up the business. The death or insolvency of any partner has the same effect. (3) A new member cannot enter the firm nor can a member transfer his interests to another person without the consent of all the members of a firm, — requirements which naturally follow from the nature of a partnership. (4) The partnership form of organization is not adapted to undertakings requiring large investments of capital and hence requiring the coöperation of a large number of persons. What advantages the partnership has come from the ease with which it can be organized and dissolved, and from its elasticity, — that is, the ease with which the contractual relations among the partners, binding as among themselves, can be altered to suit any contingencies that may arise.

The Business Corporation. — The federal census of 1909 showed that, although only about one fourth of the manufacturing undertakings included in that enumeration were organized as corporations, yet these produced nearly four fifths of the total manufacturing product (measured in money value). Most banks and insurance companies are corporations, while in the field of railway transportation corporations are in almost exclusive control. And a large and growing number of mercantile undertakings are organized as corporations.

In the case of the corporation the legal view and the accounting view of the business unit are practically identical. While the ordinary partnership is in law merely a group of individual entrepreneurs, the corporation is regarded, for some purposes, as a "person." To the incorporated business unit, — an abstract thing, as we have seen, — the law imputes some of the attributes of personality, — and of a personality distinct from that of the individual men who are the stockholders of the corporation.[1]

[1] Several states authorize the organization of "joint-stock companies" which are like corporations in many particulars. In theory they are partnerships with transferable shares and (in some cases) with limited liability. Joint-stock companies are also organized under the common law in some states. In England and the English colonies the name "joint-stock company" is applied to a statutory

Municipalities, universities, monasteries, guilds, etc., were commonly incorporated by royal charter long before business corporations of the modern kind arose, — for this did not occur until the rise of "capitalism" in the sixteenth and seventeenth centuries. The great trading and colonizing companies, such as the British East India Company, the Virginia Company, the Guinea Company, etc., were the prototypes of the modern business corporation. In connection with these trading companies the *joint-stock* principle, which had already been used in a few isolated instances of banking, was developed. This was the practice of issuing certificates to those who made contributions to the "joint stock" (or capital) of a company, which entitled the holder to a proportionate share in the profits accruing to the joint stock. The modern business corporation, like these early trading companies, is based essentially on the combination of the joint-stock principle with the legal recognition of the business unit as a distinct entity.

At the beginning of the nineteenth century what few corporations there were in America were, for the most part, banks, insurance companies, or canal and turnpike companies. The introduction of railways in the third decade of the century greatly stimulated the organization of corporations, because these new undertakings required larger investments of capital than could be furnished by any individual or firm. State enterprise, it is true, promised at one time to be an important factor in canal and railway building, but such state undertakings were usually planned with the purpose of developing natural resources, attracting immigration, and building up the trade of particular districts and particular cities rather than of getting money profits. Most of these state undertakings had succumbed by 1840, so that the field was left open for business enterprise. In the general expansion and reorganization of business that followed the Civil War the corporation form of organization began to be more generally used for all kinds of business undertakings. The growing importance of corporations in business life is partly an effect and partly a cause of the growing size of the business unit.

The Corporation Charter. — The corporation is a creature of the state, its right to exist being dependent on a *charter* or on *articles of incorporation*, granted or approved by the state. Incorporation formerly necessitated a *special act* of the legislature in each case. This gave opportunity for favoritism and monopoly and subjected corporations of all kinds to hostility and suspicion. Most corporations are now organized under *general laws*, whereby any group of men can secure a corporation

limited-liability association, essentially like the American business corporation, while the word "corporation" is usually applied only to municipal corporations and certain long-established companies, created by special charters.

charter by complying with certain prescribed conditions. In fact, all but six states now have constitutional provisions against the granting of charters to business corporations by special act.

It was formerly a common practice to grant corporation charters in perpetuity, but the decision of Chief Justice Marshall in the Dartmouth College case (1819), whereby the corporation charter was declared to constitute a binding contract between the state and the corporation, which could not be altered or amended by the state except with the consent of the corporation, has led to the general practice of limiting the life of corporations to terms of from twenty to one hundred years, fifty years being a common period. The corporation may, of course, secure a new charter at the expiration of the old, but the limited term gives the state the opportunity to change the requirements of the charter from time to time, or to refuse reincorporation altogether, as may seem most desirable. Most states, moreover, now specifically reserve the right to alter or amend the corporation charter at pleasure.

Corporation charters, or articles of incorporation, usually contain details relating to such matters as the purpose or purposes for which the corporation is formed, its principal place of business, the number of its directors, and the amount of its capitalization.

Lack of Uniformity in State Laws. — Many difficulties in the public control of corporations have arisen from the fact that while charters are granted by individual states, the activities of many business corporations extend over the boundaries of many states. Moreover, some states are much more lenient than others in such matters as the control of capitalization, requirements as to publicity, limitations on the scope of activity of a single corporation, taxes and fees, etc. New Jersey has become known as the " home of corporations " despite the fact that some states have had even more lenient laws than New Jersey. New Jersey has been favored, however, on account of the proximity of New York City — the real home of most of the greater corporate interests of the country — as well as on account of its

early start and the adaptability of its laws to great combinations of corporations.[1]

Other states, with stricter laws, could not prevent corporations organized under lax laws from doing business within their territory so far as that business is *interstate*. So far, however, as a corporation organized under the laws of one state carries on any part of its business wholly within the borders of another state, the latter state has the right of refusing to recognize it as a corporation; that is, the right to treat it as a mere partnership. In practice, however, one state freely recognizes the corporations of another state under the rule of "interstate comity." In fact, many corporations transact practically all of their business outside the borders of the state which chartered them. The real standards, therefore, are the laxest standards, not the highest. More use on the part of American states of the power of exacting certain standards from "foreign corporations," as they are called, is much to be desired.

Corporation Capital and Capitalization. — The business world uses the term "capital" in two ways. It speaks of the total permanent investments — the amount of money "tied up" in a business unit — as its capital. This is the better and more common usage. But it also speaks of the total selling value of the business unit as a whole as its capital. This last will depend not so much upon the amount of the investment as upon its profitableness. It is roughly measured by the "capitalized" earning capacity of the business, or by the market value of the corporation's stock and bonds.

The *capitalization* of a corporation should not be confused with its capital. In a strictly legal sense its capitalization is the amount of its authorized capital stock. The capitalization corresponds, in theory, to the amount of money actually invested in the business by the original stockholders. As a matter of fact, the full amount of the authorized capital is rarely paid in at the organization of a new corporation. The capitalization is apt to be, in practice, a somewhat arbitrary thing, — a nominal

[1] In 1913 the corporations laws of New Jersey were revised so that they offer fewer advantages to large corporations than they previously did.

money sum divided into units or shares, the *relative* holdings of different individuals being measured by the number of shares they own.

Corporation stock is divided into two general classes, — *preferred stock* and *common stock*, although many corporations issue only the latter. Preferred stock represents a prior claim on the earnings of the corporation. A corporation which has " 6 per cent preferred stock " outstanding can pay no dividends to its common stockholders until it has paid 6 per cent dividends on its preferred stock. Preferred stock may be *cumulative* (in which the prior claims to dividends accumulate from year to year, if unpaid) or *non-cumulative*. It may or may not have any claim on any part of the surplus profits remaining after a stated rate of dividend has been paid on the common stock.

In the popular use of the word the capitalization of a corporation includes also its *funded debt*. The funded debt is represented by *bonds*, which are interest-bearing promises to pay certain sums of money at definite times in the future. There are many different kinds of bonds, but three principal classes are: (1) ordinary mortgage bonds, (2) collateral trust mortgage bonds, (3) income and debenture bonds. The first class is based on a mortgage of all or of a specific part of the real property of a corporation. Collateral trust mortgage bonds are secured by the pledge of securities issued by other corporations, but owned by the corporation issuing the bonds. They have been much used in financing railway consolidations. Income and debenture bonds are usually secured only by the earning capacity of the business. Industrial corporations make less use of bonds than do railways, and confine themselves usually to the mortgage bond type, — of which, however, there are many subordinate varieties. In the case of many corporations the mortgage security behind an issue of bonds is in itself not of great importance, for the property mortgaged is apt to be worthless except as an integral part of a unified business establishment. The mere power of foreclosure, however, gives mortgage bondholders a position of strength in the reorganization of insolvent corporations.

Bonds are sometimes said to represent " creditor interests,"

and stock "proprietorship interests." This statement is suggestive and is not inaccurate. In a more general sense, however, stock and bonds are merely different kinds of equities in a business unit, — conveying the right to receive income, to share in the distribution of the assets in case of insolvency, and to have a voice in the management. Stockholders alone participate in the management of the corporation, although bondholders are often able to dictate policies when the affairs of a corporation are in a precarious condition. Bonds differ from stock in being terminable at a definite period of time in the future. In practice, however, the bonds of great corporations are usually replaced by new issues as rapidly as they mature.

Overcapitalization. — Much has been said about the overcapitalization of corporations, — "stock watering," as it is called. Only a few states require that all the nominal capitalization of corporations organized under their laws shall represent capital actually invested. In most states, moreover, it is not difficult for a corporation to increase its capitalization from time to time so as to secure funds from the sale of securities, or (as in the case of stock dividends) in order to afford a basis for the distribution of surplus profits without employing an excessively high dividend rate.

On the one hand it is urged that capitalization is a nominal thing, that it is immaterial whether a corporation pays 12 per cent dividends on $1,000,000 of capital stock or 6 per cent dividends on $2,000,000 of capital stock. On the other hand it is said that capitalization should not be a merely nominal thing, but that it should correspond to the actual amount of the investment; that, without regard to the amount of capitalization, regularly recurring dividends of 12 per cent suggest excessive profits in a way that 6 per cent dividends do not.

The argument in favor of a closer correspondence between capitalization and real investment is especially strong in the case of railways and other transportation corporations with quasi-public functions, municipal public service corporations, and corporations enjoying natural monopolies of all kinds. For there is a growing feeling that such corporations are in a peculiar

sense social trustees, to whom have been committed certain public economic functions that might very properly be performed by the State, if that course were deemed the more advantageous. That such corporations should be restricted to the payment of a reasonable dividend on reasonable capitalization would seem scarcely to be open to question.[1] Yet excessive profits are what make excessive dividends possible, and whether profits are excessive or not can be determined in most cases without reference to capitalization by the compulsory use of adequate accounting methods. Even where accounting methods used in the past have been inadequate, the amount of the investment entitled to a return can usually be determined with rough accuracy by means of a "valuation" or appraisal of a company's properties, coupled with an examination of the principal facts of its financial history. There is a growing use of this method on the part of both federal and state governments.

There is a prevalent but entirely mistaken belief that overcapitalization is often the *cause* of exorbitant charges. It is thought that the desire to pay dividends on an inflated capitalization leads corporations to exact a higher return for their products or their services than they otherwise would. But it can easily be seen that such cannot often be the case. For whether its capitalization be high or low the corporation will desire to fix its charges at the level which will yield the greatest possible profits. The magnitude of the corporation's capitalization will have no bearing upon the determination of the most profitable level of charges. The charges which would be most profitable under a low capitalization will also be the most profitable under a high capitalization.

A weightier indictment of overcapitalization is that it has opened the door to a number of reprehensible practices in corporation promotion and management. Where there is no definite correspondence between capitalization and investment it is difficult to make sure that some persons will not be able to acquire the securities of a given corporation on much easier

[1] It is better to curtail excessive profits by public control of rates, prices, and services than by arbitrarily limiting the dividend rate.

terms than others. Overcapitalization always makes available, for example, what may be termed a surplus of stock, and this surplus, instead of being distributed equally among the different stockholders, may be used in a disproportionate and extravagant payment to the promoter (or organizer) of the corporation, or the bankers who have assisted in marketing its securities. Or a group of men in control of a corporation may reap an unfair advantage at the expense of other security holders by turning over to the corporation properties of which they themselves are the owners in return for an exorbitant amount of the corporation's securities. Operations of this kind have only too frequently attended the organization of great industrial combinations in this country. American railway history, also, is full of examples of extravagant sums paid by operating companies to "construction companies" which had been organized for the purpose of building the roads and selling them to the operating companies. These payments were usually made in bonds or stock, and burdened the operating company with either a heavy load of fixed charges or an inflated amount of capital stock. In fact, the time is not long past when it was frequently said of representative American railroads that the whole amount of the actual investment in their properties was represented by their bonded debt, while their stock issues represented nothing but prospective surplus earnings. In the promotion of industrial combinations it was common practice to issue enough preferred stock to cover the actual expense of acquiring the various properties brought into the consolidation and to issue in addition a large amount of common stock representing nothing except whatever increase in earning power might result from combination. The common stock, at whatever price it could be sold, represented, in fact, the profits of promotion; and these usually went to promotors and other "insiders." In both the railway and industrial field, however, conditions are much improved. In many cases large additional investments have been made out of earnings without a corresponding increase in capitalization; in certain other cases corporations have been reorganized, with reduced capitalization. But, nevertheless, there are recent

instances of unfair and even fraudulent use of excessive capitalization as a means of securing special profits for those in control of a corporation's policies.[1]

The situation is clearly one that needs mending. Two very different methods of regulation have been proposed. The first of these two methods involves the definite limitation of a corporation's capitalization to an amount corresponding to the sum of money actually received by the corporation and invested in its business. If securities are issued in exchange for property turned over to the corporation or for services rendered it, a full account must be rendered of all of the circumstances attending such transactions, and an official appraisal of their value may even be required. Such, in general, have been since 1884 the conditions under which joint-stock companies in Germany issue their shares, and it does not appear that these requirements have hindered the organization or growth of such companies in that country.

Under the second method of regulation, corporations are left free to issue their securities in such quantities as they deem best, it being required merely that publicity shall be given to the prices at which the securities are sold, to the price placed upon any property or services paid for in securities, and to the disposition made of all money obtained by the issue of securities. This kind of regulation is adopted, in principle, in the British Companies Act, but the mechanism provided to enforce it is not very effective. At best, however, even the most thoroughgoing publicity respecting the conditions under which securities are issued cannot be a wholly adequate safeguard against the real evils of over-capitalization. Publicity might tend to curb extravagant allowances for personal services, but it would not always prevent the overvaluation of large properties taken in exchange for securities. To think otherwise is to count too much upon the knowledge and alertness of the individual stockholder. Certain American railroads have openly paid exorbitant prices for branch lines and other properties, without re-

[1] See the special reports of the Interstate Commerce Commission on the St. Louis and San Francisco and the New York, New Haven, and Hartford railroads.

ceiving any protests, at the time, from stockholders and creditors injuriously affected by these transactions.

We have done very little in the United States in the regulation of the capitalization, or the other conditions of promotion, of ordinary industrial corporations. Some states, however, now exercise a fairly rigid control over the new security issues of railways and other public service corporations. This regulation, however, does not have as its primary motive the protection of minority stockholders. It is to be interpreted as part of a general attempt to limit the earnings of such corporations to a fair return upon a reasonable capitalization.

It has been suggested [1] that in order to guard against the very prevalent misunderstanding of the real nature of corporation shares, the "dollar mark" should not appear on them, or, in other words, that they should have no "par value." They would then become, in form as in fact, merely certificates of the ownership of certain fractional equities in a corporation's business. There is much that is attractive about this proposal. If the issue of securities is to be as unregulated as it has been in the past, it would be better to make it impossible for investors and the general public to attach any fictitious importance to the amount of a corporation's capitalization. But if we are to have the regulation of promotion and capitalization that we need, there would be nothing gained by the change suggested. And the "dollar mark" on stock certificates is convenient in many ways.

Form of Capitalization. — A significant feature of recent development in corporation finance is the multiplicity of types of corporate securities. It is no uncommon thing, for example, for the equities in a railway corporation (in addition to the floating debt, or accounts payable) to be divided among a dozen or twenty varieties of bonds and two or three varieties of stock. This multiplicity of securities is of advantage to the corporation in that it enables it to offer to investors and speculators a carefully graded assortment of risks, and this makes the total selling value of a corporation's securities greater than it would otherwise be. This complex kind of capitalization has, however, some undesirable features. If the owners of a particular security — the common stockholders, perhaps — control the corporation,

[1] Most recently by the very able federal Railroad Securities Commission of 1911. The state of New York now permits the issue of corporate shares without par value.

they may desire to increase the value of their securities for speculative purposes by the payment of unearned dividends, — a proceeding which would be opposed to the interests of the holders of all the other securities of the corporation. Or the holders of preferred stock may wish to put some of the earnings of the corporation back into improvements in its plant, so as to safeguard its future earning capacity, while the holders of common stock may prefer that all the earnings be paid out in dividends. Moreover, in cases of insolvency and reorganization, it is a difficult matter to untangle and to adjust equitably the rights of the holders of the different kinds of securities.

In times of prosperity corporations often pay for extensions of their plants from the proceeds of bond sales, because it is estimated that the earning power of such extensions will more than suffice to pay the interest on the bonds and will afford a handsome surplus for the stockholders. Corporations thus accumulate in prosperous times an unwieldy load of fixed charges in the form of interest on bonds, — a fact which is apt to be a source of difficulty in less prosperous years. In periods of financial stringency these fixed charges are a common cause of insolvency, receiverships, and consequent reorganizations, from which the bondholders are apt to emerge as stockholders, and in which the stockholders are apt to lose their holdings. The legal restriction of the securities issued by any one corporation to one kind of stock and three or four varieties of bonds is both feasible and desirable. Nor should the bonded debt usually be allowed to exceed the amount of the paid-up capital stock.

Corporation Management. — The management of business corporations is, as a rule, in the hands of boards of *directors*, elected by the stockholders from among their own number. The details of management are in the hands of officers, chosen usually by the directors. In principle this system achieves something like representative government of the affairs of the corporation. In practice, in the larger corporations, some of the directors are apt to be " dummy directors," — men exercising no real power or responsibility, made directors in order to complete the number prescribed in the charter, — or are the representatives of great

financial interests, and often of competing interests. Directors of this latter sort are not primarily concerned with the management of a corporation in the interests of its stockholders and bondholders. They are directors for the purpose of guarding special interests, and in many cases for the purpose of preventing competition from becoming anything more active than an armed peace. In some cases the real direction of a corporation's policies is in the hands of an " executive committee " or " finance committee " of three or more directors representing the person or persons in actual control of the corporation.

The proper adjustment of the rights and duties of the various members of a corporation is a matter of general public concern. This is partly because the shares in a corporation are freely transferable. A new member cannot protect himself by making special contracts with the other members, but must accept the conditions fixed by the by-laws of the corporation and by the laws of the state which chartered it. Moreover, the ordinary shareholder in a large corporation has little opportunity to participate in any way in the conduct of the affairs of the corporation, even for the purpose of protecting his own interests. The general theory upon which the law of corporations is based is that the corporation is a democracy with a representative government. That is, the directors are supposed to *represent* the interests of the stockholders. For many small local corporations this theory undoubtedly corresponds fairly well with the facts. But large corporations, with hundreds or thousands of stockholders, living in different parts of the country, and even in different countries, cannot accurately be pictured as representative democracies. Outside of a group of holders of large blocks of stock, the stockholders, whether a minority or a scattered majority, are likely to be not only powerless but voiceless. It is difficult and probably undesirable to change this general situation. The growth of large corporations means necessarily the growth of widespread participation in large business undertakings. But the participators, whether stockholders or bondholders, are to be regarded as *investors* rather than active partners. What is needed in our corporation

statutes, therefore, is a frank recognition of this situation. In many cases directors cannot, in any real way, "represent" the stockholders. For this reason their responsibility as *trustees* for the stockholders should be emphasized in our laws.[1]

Advantages of the Corporation as a Form of Business Organization. — From the point of view of the business man the corporation presents decided advantages over the partnership for all undertakings of considerable size. Some of its points of superiority are: (1) Stockholders usually have no personal liability for the corporation's obligations except so far as the full par value of their stockholdings has not been paid up.[2] (2) The relative permanence and stability of the corporation are of decided advantage, especially in undertakings requiring large investments of capital in relatively fixed and permanent forms. (3) The concentration of executive power in the hands of directors and officers leads to efficiency in management. (4) The transferability of corporation securities makes it possible for stockholders to enter or leave the undertaking at pleasure. (5) The division of the securities into small units and into different grades and classes affords opportunities to all kinds of investors, — the small and the large, the conservative and the venturesome. (6) All of the advantages named make it easier for the corporation to attract and to use efficiently large amounts of capital, furnished by many different investors.

Social Aspects of the Growth of Corporations. — That corporations do possess desirable features, from the point of view of

[1] On this account the recent development of "express trusts" as business organizations, especially in Massachusetts, is of particular interest. These have "trust deeds" in place of articles of incorporation, "trustees" in place of directors, and "beneficiaries" in place of stockholders. In simplicity, adaptability, and in the protection of investors and creditors, this form of business organization has some real advantages over the corporation. But it has not yet been subjected to adequate public control, and there are some minor difficulties in its working. It may prove to be, however, the germ of an important development in business organization.

[2] Exception should be made of banking and insurance corporations, in the case of which "double liability" on the part of the stockholders is common. A few states impose some measure of personal liability upon the stockholders of all corporations organized under their laws.

business interests, is a fact clearly evidenced by the unprecedented growth of this form of business organization. In the main, efficiency for business purposes, for money-making, means efficiency from the social point of view, productive efficiency also. But, nevertheless, the two points of view are not identical, and what is desirable from one point of view is not always desirable from the other.

The gap between money-making and service to society (never quite identical things) is distinctly widened when those in control of a corporation's policies subordinate the profits to be obtained by the sale of its products to the profits to be obtained by speculation in its securities. Many of our greatest corporations are directed by men to whom fluctuations in capital values (as represented in the prices of securities) are a much more important source of personal income than are the net earnings of such corporations. The payment of unearned dividends, the nonpayment of earned dividends, the direction of a corporation's policy for the benefit of the holders of one kind of security among the different ones issued by the corporation, the effecting of corporate combinations and reorganizations that will affect the stock exchange rather than the produce market, — these are some of the more obvious results of the unfortunate relation between corporation management and speculation in corporation securities.

It should also be noted in this connection that the growth of corporations is bringing with it a subtle but very significant change in the nature of the institution of private property. So far as a large and increasing proportion of productive wealth is concerned, we are losing that direct relation of ownership between men and goods which Arthur Young had in mind when he said, " The magic of property turns sand into gold." We often have, instead, several layers of corporation securities interposed between the ultimate owners and the ultimate objects of ownership. The effect of this will undoubtedly be to bring about the more thorough domination of business principles in the business world. Sentiment, the honored traditions of long-established firms, the " pride of ownership," the joy of workmanship (which may be felt by the employer who turns out a good product, as

well as by the workman) are bound to yield yet more completely to the sway of the cold logic of corporation accounts and stock market quotations. The adequacy of purely business principles as the foundation of our economic life will be tested more thoroughly under the corporation form of organization than ever before.

Trusts. — A distinctive feature of the economic development of the past few decades has been the combination of individual corporations into larger concerns, or trusts. The "trust," in the technical sense, involved either giving a board of trustees the absolute control of the actual properties of the different concerns in the combination, or what amounted to the same thing, assigning to them the stock of each corporation, with its voting power, in exchange for "trust certificates," on which dividends were paid. The Standard Oil Trust of 1882 was the first important combination of this kind, but it was speedily followed by several others. In 1890, in a case brought by the state of New York against the sugar trust, the trust agreement was held to be illegal under common law.[1] Corporate combinations were not destroyed by this decision. They changed, however, to a more definitely coherent form, — that in which a single great corporation dominates the consolidation.

In most cases, this corporation, which is usually organized for the purpose, does not own the actual plants of the various concerns in the combination, but simply owns all or a majority of the stock of each. It is accordingly called a "holding company." The holding company exchanges its own securities for the securities of constituent companies, or, when necessary, it buys the securities of the constituent companies with funds secured from the sale of its own securities, — sometimes by the sale of bonds secured by the pledge of the securities of constituent companies as collateral. Not only in industrial consolidations,[2] but also in

[1] *People* v. *North River Sugar Refining Co.*, 121 N. Y. 582. A similar decision was rendered two years later by the Supreme Court of Ohio in *State* v. *Standard Oil Co.*, 49 Ohio St. 137.

[2] A very complete list of "trusts," prepared by Mr. Byron W. Holt for the *World Almanac* (1908), contained the names of about 250 industrial combinations, most of which were holding companies.

railway and electric railway mergers has the holding company device become important.

From the point of view of business organization the holding company is simply an extension of the principle of the corporation. The holding company needs for purposes of control only a majority interest in the stocks of its subsidiary corporations. Various holding companies may in turn be combined by means of one larger holding company, and the process may, and does, go even further. A group of capitalists may, by an investment of $1,000,000, for example, control a holding company with a stock issue of $2,000,000, which in turn may control corporations with $4,000,000 of stock outstanding,[1] — and some of these last may in their turn be holding companies. The result is a tremendous concentration of industrial and financial power, with the minimum of liability. The uncontrolled use of the holding company device leads to neglect of the interests of the minority stockholders in the various corporations concerned; to difficulty in fixing the legal responsibility for corporate misdeeds; to an undesirable complexity in the economic and legal relations of the holders of securities in the different corporations, and to the subordination of industrial to speculative ends.

The " trust problem," however, has attracted more attention as a problem of monopoly than as a problem of business organization. Combination and monopoly, it is important to note, are not identical things; we may have either one without the other. But the movement toward combination originated in the efforts of business men to escape from the restraints imposed upon them by competition. Use has often been made of simpler forms of combination than the trust and the holding company. Agreements to sell only at certain prices, agreements to limit output, the employment in common of one selling agent, pooling (the distributions of orders or of profits to the parties to the agreement in predetermined proportions), and other devices have

[1] It is assumed, for convenience, that the stock in each case is worth par and that the ownership of half of it will give substantial control. In the case of industrial combinations ownership of all the stock of the subsidiary companies by the holding company is not uncommon.

been used. Such combinations are formed by contracts entered into by a number of individual firms, each of which retains its own autonomy in all other respects. These contracts are unenforceable at common law — being held to be "contracts in restraint of trade" and hence contrary to public policy — so that it was difficult to be sure that any one firm would abide by the contract any longer than it deemed it to be to its own individual advantage. Combinations of this sort still persist. Railroad rate agreements are, for example, both universal and necessary.

But the movement toward combination which has played so important a part in the economic history of the past thirty years has been characterized especially by the organization of combinations of a more thoroughly unified type, in which each individual firm brought into the combination yields up its own autonomy and is absorbed by a corporation, usually a holding company, organized for the purpose. These unified combinations, it was thought, would be valid at common law, and would be less vulnerable under the new anti-combination statutes that were being enacted. Their management could be made more effective, and their comparative permanence and dependability made possible the adoption of business policies based on long-time considerations. Moreover, so long as there was public confidence in their success, they afforded an inviting opportunity for promoters to reap profits.

The Causes of Combination. — The specific motives usually mentioned as the most important causes of corporate combinations are (1) the economies of large-scale business; (2) the elimination of purely competitive expenses (some kinds of advertising, for example); (3) the power to limit output and control prices.

The first of these factors suggests the difficult question of the most profitable size of the business unit. The question should not be confused with that of the most economical size of the industrial *plant*. Many of our present-day business units are so large that they operate a number of practically duplicate plants. To that extent, at least, they are larger than is necessary to secure the maximum technical efficiency of the plant. Nor

should the question be confused with that of the factors which bring about the condition of decreasing expenses in an industry at large. Certain productive advantages sometimes attributed to great industrial combinations — such as the power of utilizing highly specialized plants, equipped with highly specialized machinery and located at the most favorable points — are advantages which do not have to wait upon combination, but which are not only available but certain to be developed in any large and growing competitive industry. Much has been said of the combination's ability to buy its raw materials on the largest scale, and therefore most cheaply, and of its ability to ship its products in large quantities, and therefore most economically. But it has not been shown that the combination has a marked advantage in these particulars over large competitive establishments, unless we should take account of the unfair discriminations that railway companies have too often made in favor of the large combinations.

The real problem is whether the mere fact of combination, taken by itself, brings with it any real net economies in production. It probably very often happens that combination does effect some real savings. Uniform systems of accounting and cost-keeping can be introduced; noteworthy economies found in any one of the plants can be introduced in all the plants of the same type; high and uniform standards can be enforced by the central administration. Especially in combinations of the "integrated" type,[1] there are undoubtedly real economies in the general coördination of the different successive stages of the industrial process, in the nice adjustment of the supply of raw materials and intermediate products to the demand for finished products, and in the adaptation of transportation facilities to the needs of the industry. The Standard Oil Company undoubtedly effected great economies in the transportation of oil by its use of pipe lines, and these could hardly have been constructed on so large and effective a scale if the industry had remained competitive.

On the other hand, however, great combinations have certain

[1] See p. 88, above.

disadvantages inseparable from their size. Their economies are largely those of systematization and standardization, and these are prone to degenerate into inflexible and deadening routine. The very losses of competition may sometimes be in the long run a real social advantage. For they result in part from variety of experimentation and from the free scope given to individual initiative and individual planning. In competitive industry there is a continuing natural selection of the fittest men and the fittest methods. Nor are the best results always achieved by a hierarchical organization of industry, in which corporation officials, managers, and superintendents watch only over the larger and more general aspects of an industry and depend upon an army of subordinate employees (no matter how scientifically organized and directed) to attend to all details. There is sometimes no effective substitute for intimate personal supervision on the part of those primarily responsible for the success or failure of a business undertaking.

Passing to the second and third general classes of motives that are advanced as causes of corporate combinations, it is sufficient here to note that whether purely competitive expenses and competitive prices are eliminated by combination depends upon whether the combination has any real basis of monopoly power over and above the mere fact of combination, which, taken alone, can give at most only a temporary monopoly. For a combination without some real source of monopoly power to attempt to secure monopoly profits is to invite new enterprise and new capital to come into the industry. In other words, it is to induce latent competition to become active competition.

It is plain, however, that if any or all of these three classes of advantages do exist in the case of a particular combination, the earning power of the combination will be greater than the total earning power of the separate concerns before consolidation, — a difference which will be reflected in the value of the securities of the holding company. It is this increment in capital value, due to the real or expected advantages of consolidation, that has been the chief cause of such combinations. The organization of trusts has in many cases been effected by professional pro-

moters, whose connection with an undertaking does not continue any longer than is necessary in order to secure the profits of consolidation. A few great trusts like those which have figured in the oil, sugar, steel, and tobacco industries have been conspicuously successful in a business way. Many others were "made to sell"; that is, were organized only in order that profits might be gained through the sale of their securities, and have been weighted down by a capitalization not justified by their actual earning capacity. Some of these have already fallen to pieces; others have been reorganized, with diminished capitalization.

"When judged in terms of the promises of their promoters their histories stand as striking acknowledgments of the inadequacy of mere consolidation as a basis of economic efficiency. Two separate and distinct sets of causes can be discovered to explain why the overwhelming majority of these industrial combinations failed to prove as successful as their promoters had anticipated. One set was psychological in character and concerned with the difficulties attending the administrative management of a large business. The other was economic in character and concerned with the difficulties attending the creation of a business organization sufficiently powerful to dominate an industry in the presence of actual or potential competition."[1]

It can hardly be held, then, that great industrial combinations are, what they have sometimes been called, "the natural products of economic evolution." Even where one has succeeded in so dominating a field as to establish a substantial monopoly, it has generally been found either that it possessed one or more of the specific sources of monopoly power, or that it was enabled by its size to avail itself of peculiarly destructive methods of competition.

Anti-trust Laws. — Most states have statutes and some have constitutional provisions against "combinations in restraint

[1] A. S. Dewing, *Corporate Promotions and Reorganizations*, p. 558. Dr. Dewing's conclusion, quoted above, is based on a very careful study of the more important reorganizations of industrial combinations. He finds the following specific causes of inefficiency: (1) diffusion of responsibility; (2) lack of knowledge of individual employees; (3) lack of loyalty of officers and directors; (4) lack of attention to the laborious parts of the business by higher officials; (5) prejudice of customers against "trusts."

of trade." These are aimed primarily against large combinations of the kind already described, although if strictly construed they also make illegal the whole mass of price agreements and trade restrictions, general and local, which are a much more common and characteristic feature of modern business than is generally supposed. State anti-trust statutes have accomplished but little, partly because they have often been aimed at forms rather than at facts, at symptoms rather than at fundamental causes, and partly because they have been used only sporadically. The experience of the federal government has shown that if the prosecution of illegal combinations is to be conducted successfully, there must be thoroughgoing preliminary researches into the history and business methods of the combinations. The state governments have been poorly equipped for this kind of work.

The Sherman Anti-trust Act of 1890 is a federal statute, based upon the federal power to control interstate commerce. It declares illegal "every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several states, or with foreign nations." It also makes it a misdemeanor for any person to "monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several states, or with foreign nations." The most important aspect of the statute is that it gave the federal courts jurisdiction in these matters. The government can proceed under the statute in either or both of two ways: (1) by bringing criminal prosecutions against persons entering into unlawful combinations; (2) by instituting proceedings to prevent and restrain violations of the law. A number of criminal prosecutions have been made, but most of these have been unsuccessful. It has been found difficult to get a jury to convict for an offense so abstract and general and, possibly, so common, as "restraint of trade." The more important results of the law have come from proceedings for the dissolution of unlawful combinations, and it is these only that we shall discuss.

There has been much discussion of the precise meaning of the

phrase " restraint of trade " as used in the Sherman Act. This phrase was taken from the common law, in which its usual application was to contracts by which a man agreed not to compete with certain others. When the restraint of trade involved in such agreements was merely incidental to some legitimate purpose, and necessary in order to carry out that purpose, the contracts have usually been deemed valid at common law. Thus, if two competitors form an ordinary partnership, or if one man sells his business to another, agreeing not to set up another business undertaking of the same kind (so as to protect the sale of the good-will of his former business), the restraint of competition involved in such contracts does not necessarily render them illegal. But if the direct purpose of a contract is restraint of trade it is invalid and unenforceable and under some circumstances criminal.

Although the Sherman Act was intended to be primarily a weapon against great industrial combinations, it has been held by the courts to apply also to labor unions and railway combinations. It has never been held, however, that labor unions are illegal under the act because of any alleged restraint of competition in the supply of labor. But certain activities of labor unions, particularly strikes and boycotts, have been condemned by the federal courts because such activities " interfere with the free flow of commerce from state to state." [1] This, it will be noted, is a very different thing from restraint of trade in the old common-law sense.

In 1897 the Supreme Court held that railroad rate agreements were in violation of the Sherman Act.[2] An important point in these decisions was that neither the fact that railroad rates agreements had been defended by the Interstate Commerce Commission nor the claim that the rates agreed upon were reasonable was allowed to stand as a defense. If the direct purpose of such agreements, said the court, is restraint of competition,

[1] *United States* v. *Workingmen's Amalgamated Council*, 55 Fed. 605; the Railway Strike Cases, 64 Fed. 30, 749, and 67 Fed. 705; *Loewe* v. *Lawlor* (the Danbury Hatters' Case), 208 U. S. 274.

[2] *United States* v. *Trans-Missouri Freight Association*, 166 U. S. 290; *United States* v. *Joint Traffic Association*, 171 U. S. 505 (1898).

they are illegal, whether reasonable or not. Railroad rate agreements still exist, but no more of them have been attacked by the government. An epoch-making decision was that which in 1904 ordered the dissolution of a New Jersey corporation, a holding company, organized to hold the stock of the Great Northern and Northern Pacific railroads, two " parallel and (supposedly) competing " lines.[1] The importance of the decision is that for the first time the holding company, as an instrument for restraining competition, was shown to be vulnerable to legal attack. But the application of the Sherman Act to railway combinations is in many ways unfortunate. Under the Interstate Commerce Act we have since 1887 regulated railway rates on the assumption that railways are natural monopolies, and this has proved a much more effective method of dealing with unfair rates than has the attempt to force competition into the railway field. The good accomplished by the dissolution of railway combinations lies in the inroads these dissolutions have made into the use of the holding company device, with its undue concentration of financial power and its opportunities for the unfair treatment of minority stockholders. But this is only an incidental result of these decisions, and lies quite outside the general purpose of the Sherman Act. Many large holding companies, in both the railroad and the manufacturing fields, are wholly invulnerable to prosecution as " combinations in restraint of trade."

For twenty years the Sherman Act was least effective in the very field to which it had been particularly designed to apply. A few industrial pools and price agreements were declared illegal by the federal courts, but in the only case involving a trust of the modern type that came before the Supreme Court the deci-

[1] *United States* v. *Northern Securities Co.*, 193 U. S. 197. A similar decision, in 1912, involving interests of even greater magnitude, dissolved the merger of the Union Pacific and Southern Pacific railroads (226 U. S. 61). In the St. Louis Terminal Railroad case (224 U. S. 283), also decided in 1912, a corporation owned by fifteen railroads, and possessing a monopoly of railroad terminal facilities in St. Louis, was not dissolved, but was merely directed so to reconstruct its organization that new companies might participate in its ownership and be given the advantages of its services on equal terms with railroads then in control of it.

sion was for the defendant corporation.[1] For many years there were few prosecutions of industrial combinations. The government lacked properly equipped bureaus of research and investigation, and the government officials were apparently apathetic. But both of these conditions were changed during President Roosevelt's administration. Finally, in 1910, the government was successful in suits brought for the dissolution of two of the greatest of industrial combinations, the Standard Oil Company[2] and the American Tobacco Company.[3] Possibly the most important thing in these decisions was the emphasis the Supreme Court placed on certain business practices of these companies as evidence of their monopolistic intent. Each company had achieved a dominating position in its field, and the Standard Oil Company, at least, had a virtual monopoly. Helped at first by railroad rebates, it had consistently pursued a policy of monopolization, either absorbing its competitors or driving them out of business. The evidence showed that it had acquired from 85 to 97 per cent of the business of transporting, manufacturing, and selling petroleum and its products, and such competition as there was seems to have existed by its sufferance. It did not have a natural monopoly, for only about one ninth of the total national production of crude oil came from its own wells. It had certain advantages over its competitors, especially in its control of pipe lines and in the low railroad rates given to points at which its refineries were located. Yet it did not have a full measure of monopoly power. Active competition was always possible and was kept down only by the use of what have come to be called unfair competitive methods.

Unfair competition has come to play a very important part in the trust problem. It includes the use of such devices as (1) cutting prices below cost in a locality in which competition

[1] *United States* v. *E. C. Knight Co.*, 156 U. S. The decision in this case, involving the American Sugar Refining Company, was to the effect that a monopoly in the *manufacture* of sugar could not be held to be a monopoly in interstate *commerce*.

[2] 221 U. S. 1.

[3] 221 U. S. 181.

appears; (2) discriminating in favor of merchants who agree to refuse to handle or to discriminate against competitors' products; (3) the use of threats and other forms of intimidation, (4) the employment of spies to ascertain the details of competitors' business transactions; (5) the production of special brands of goods, sold at very low prices for the purpose of driving competitors' products out of the market; (6) the use of subsidiary companies as bogus independent concerns. Most of these methods were not in themselves illegal. Some of them, including price-cutting on one or more parts of an establishment's output, are common in ordinary competitive trade. But when used by large industrial combinations such methods have come to be called " unfair," because of the purposes prompting their use and because of their effects. There is a very important difference between an effort to gain as much business as one can under competitive conditions and an effort to destroy competitive conditions. And methods that may be harmless when used by an enterprise of ordinary size become dangerously destructive weapons in the hands of great industrial combinations. The combination is able to wage a destructive competitive warfare because it can stand a loss at one point or on one part of its output large enough to send its smaller competitor into bankruptcy. The use of unfair methods of competition by the Standard Oil Company and the American Tobacco Company was deemed by the Supreme Court weighty evidence of the purpose of those combinations to monopolize "trade and commerce " in their respective fields.

These decisions showed that the Sherman Act could be used as an efficient tool for the dissolution of great industrial combinations organized and conducted with monopolistic intent. Since 1910 a number of successful suits have been brought for the dissolution of other trusts, while yet others have voluntarily reorganized in accordance with plans approved by the government.[1] It is too early to judge of the ultimate effects of these industries. There can be no doubt, however, that in a number of industries, including the oil and tobacco industries, there is

[1] See the Annual Reports of the Attorney General, for 1910 and subsequent years.

a larger measure of normal competition than before the dissolutions.

The reorganization of industrial combinations in such a way as to comply with the law often presents difficult problems. Where the trust is a holding company it is impossible to distribute its stock holdings to the original owners or their heirs, for many of the holding company's own securities will have changed hands since its organization. At first the courts merely directed that the securities owned by the holding company be distributed *pro rata* among its own stockholders. But where a majority of the stock of the holding company was closely held by a small group of men, and where the holding company held a substantial majority of the stock of its more important subsidiary companies, this method of dissolution was unlikely to result in the prompt restoration of normal competitive conditions in the industry. More recently the dissolution plans have been more carefully worked out, so that no one group of stockholders is left in control of all the different constituent parts of the former combination.

In 1914 Congress enacted two new statutes, the Clayton Anti-trust Act and the Federal Trade Commission Act. The Clayton Act is designed to accomplish a number of different things. We can mention only its more important provisions:

1. It definitely legalizes those activities of labor unions which had been declared illegal under the Sherman Act. This topic is discussed elsewhere in this volume.[1]

2. It prohibits the acquisition by one corporation of stock in another corporation when the effect may be "to substantially lessen competition" between such corporations, or "to tend to create a monopoly." It also makes it illegal for a man to serve (1) as a director or officer of a bank in the Federal Reserve system and at the same time as a director or officer of any other bank or as a private banker, when one bank has liabilities of more than $5,000,000 or when both are located in a large city; (2) as an officer or director of a common carrier and at the same time as an officer or director of a firm having large dealings with the carrier in securities, supplies, or contracts for construction or maintenance (unless under publicly supervised competitive bidding); (3) as a director of two or more industrial corporations engaged in interstate commerce, if one

[1] Chap. XXIII.

has an aggregate "capital, surplus, and undivided profits" of more than $1,000,000 and if they are, "by virtue of their business and location of operation, competitors." These provisions against "interlocking" directors and officers, like the provision against intercorporate stockholding, have a wholesome purpose and may accomplish some good in particular cases. But so far as their effect upon industrial combinations is concerned they add little to the Sherman Act, as now interpreted by the courts. It will be noted, however, that intercorporate stockholdings and intercorporate directorates are prohibited by the Clayton Act when they may tend to lessen competition between the corporations directly concerned, even though general competitive conditions may continue in the industry in which the corporations are engaged.

3. The Clayton Act prohibits certain trade practices, including (1) unjustifiable discrimination in the prices charged to different purchasers, (2) leases or sales of goods made with the understanding that the lessee or purchaser shall not use or deal in the goods of a competitor of the lessor or seller, as well as special discounts or rebates made upon such conditions. In cases under the Sherman Act the courts, as we have seen, had already counted the use of such practices among the evidences of an illegal purpose to monopolize an industry. And injunctions against their further use have been included in the decrees in some of these cases. If follows that in these particulars, also, the Clayton Act adds little to the Sherman Act.

The Federal Trade Commission, established in 1914, is composed of five members, appointed by the President. It succeeds the Bureau of Corporations, which was established in 1903 for the primary purpose of making special investigations of particular corporations and combinations and of the conditions existing in particular industries. The Federal Trade Commission not only has large powers of investigation, but it has the further power to require annual or special reports from interstate corporations in such form and relating to such matters as it may prescribe. At the request of the Attorney General it is to investigate any corporation alleged to be violating the

anti-trust laws, and to make recommendations for the readjustment of its business. In suits brought under the anti-trust acts the Commission may be asked by the court to prepare an appropriate form of decree, which is, of course, subject to rejection or change by the court. The importance of this provision is in its bearing upon the outcome of dissolution proceedings under the Sherman Act. The drafting of a wise plan of reorganization for an offending combination is often an exceedingly difficult matter, requiring not only care and judgment, but also a large amount of technical information about the general condition of the industry affected. Furthermore, the Commission is authorized to make investigations of the manner in which decrees in suits under the anti-trust acts are carried out.

The most important power of the Federal Trade Commission is undoubtedly that of issuing orders restraining the use of "unfair methods of competition in commerce." So far as such methods are used as part of a general attempt to monopolize an industry, the new statute adds nothing to the Sherman Act except a new, prompt, and efficient method of procedure. If this power is wisely used it should be possible in many cases to put a stop to aggressive monopolizing in its early stages, before much harm has been done. But the power committed to the Federal Trade Commission has even wider aspects. It is to be hoped that the Commission may be able to build up and maintain higher standards for competitive business methods in general; that it may fix the lines beyond which one should not go in the attempt to divert trade from one's competitors.

Public Policy towards Industrial Combinations. — Our anti-trust laws express what is undoubtedly the dominant public sentiment in the United States with respect to large industrial combinations formed with the purpose of obtaining a monopoly. Our policy has been one of repression, of compulsory disintegration. Undoubtedly we have made many blunders in the ways in which we have formulated and enforced this policy. We have, in some cases, attempted to force competition

into the field of the natural monopolies; we have often attributed too large a significance to the mere fact of combination; we have in particular attempted to cure by a sweeping prohibition of "restraint of trade" and "monopolizing" many evils that are, in their more important aspects, matters of corporation finance, rooted in the laxity of our statutes in respect to the organization and management of corporations. But this does not mean that our general policy has been fundamentally mistaken. Monopoly has yet to prove itself more efficient than competition. And, moreover, it is not entirely a question of economic efficiency. There are differences between monopoly and competition in their effects upon the distribution of wealth, upon the equality of economic opportunity, and upon a host of economic and social relations; and in most of these particulars, it is generally believed, the advantage rests with competition. At any rate, we are proceeding along sound lines in endeavoring to raise the level of competitive methods and to eliminate any advantages which large combinations may have in their power of destructive competition. This will give a fairer field for experimentation with respect to the forms of business organization really best fitted for survival.

There are some who believe that our general policy has been wholly mistaken; that we should permit and even encourage the formation of large combinations; that we should place monopoly power in their hands, and that we should then subject their prices and their products to public control of the kind that now exists in the railway field. Now there is, in fact, no good reason why our notions of what constitutes a "public calling," or a "business affected with a public interest," properly subject to rigid public control, should not be extended so as cover all natural monopolies. But to regulate prices in any industrial field, not naturally monopolistic, would be an exceedingly difficult and complex undertaking. It would also be difficult to define the terms on which new capital and new enterprise might come into the "regulated" industry. And there is, as yet, no proof that this proposed change in policy would, if put into effect, result in any large economic or social gains.

Federal Control of Corporations. — The unfortunate effects of the lack of uniform state requirements in such matters as purposes of incorporation, corporate powers, qualifications and responsibilities of promoters and directors, capitalization, and the like could in large measure be remedied by federal action. The Clayton Act touches only incidentally upon this field. Its provisions relating to incorporate stockholdings and interlocking directorates were framed with reference merely to the problem of the preservation of competitive conditions. What is needed is a federal statute dealing thoroughly and systematically with the promotion, organization, and management of corporations engaged in interstate commerce. Canal, railway, and bridge companies have in the past been chartered by the federal government, just as national banks are now. It would be legally possible and economically advisable to require at least a *federal license* from all corporations engaging in interstate commerce. Moderate and just requirements as to publicity, capitalization, and other things might very well be imposed as the price of federal license. Aside from the present lack of uniformity in state laws, the mere size of modern business corporations and the interstate scope of their operations make it difficult for any individual state or states to control them efficiently.

Industrial Combinations in Other Countries. — A movement toward combination in some form has manifested itself in practically every country which has large industries of the modern type. In England, however, the movement has made much less headway than in the United States. This may be attributed in part to the fact that England's " company laws " are not so lax as are the corporation laws of many of our states, in part, possibly, to the absence of a protective tariff, and in part to the highly specialized character of English industries. During the past twenty or thirty years, however, a number of important combinations have been formed in England, but only a few of these have been successful. An English combination, it may be noted, has an international monopoly of sewing cotton. England has no statute forbidding combinations,

but the contracts by which "combinations in restraint of trade" are formed will not be enforced by the courts.

In Germany and in certain other countries of continental Europe the dominant form of combination is the *Kartell*. This resembles a pool more than it does the thoroughly centralized industrial combinations of the United States. The Kartell itself is, however, usually organized as a joint-stock company. The individual companies constituting its membership continue as independent producing establishments. The Kartell controls sales, prices, output, and the distribution of orders and of profits. Opinions in Germany with respect to the success of the Kartells is greatly divided. On the one hand it is claimed that they have eliminated many of the wastes of competition and that they have been especially active and successful in securing sales in foreign markets. On the other hand it is charged that they have discriminated against home consumers by selling abroad at lower prices than they charge at home, and that they even go so far as to sell at very different prices in different part of Germany, utilizing, as far as possible, the principle of "charging what the traffic will bear." In 1906, when a government investigation was made, there were 384 Kartells in Germany, and many new ones have been organized in subsequent years. Noteworthy among the German Kartells have been the Rhenish-Westphalian Coal Syndicate (of which the Prussian government, as a large mine owner, was for a short time a member) and the Steel-works Association.

QUESTIONS AND EXERCISES

1. What are the terms under which corporations are chartered in your own state? What anti-trust laws are in force there?

2. Explain the various items in the published balance sheet of some industrial corporation.

3. What limitations should be attached to the statement that "a corporation is a fictitious person"?

4. Does the word "capital" mean the same thing in accounting and in economics?

5. Report on the history of one of the following: United States Steel Corporation; American Sugar Refining Company; American Tobacco

Company; International Harvester Company; United States Leather Company; Rhenish-Westphalian Coal Syndicate.

6. What advantages has a large plant? a large business unit? a monopoly?

7. What special burdens are imposed upon corporations? Has the corporation any other disadvantages as a form of business organization?

8. In what respects do the Clayton Anti-trust Act and the Federal Trade Commission Act cover the same ground?

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CHAPTER XIV

MONEY

The vast system of exchange, which is the most characteristic single feature of present-day economy, rests upon the use of money. We have seen that some economic writers have pictured an imaginary primitive state of "barter economy"; in which, before the use of money, goods were exchanged directly for goods. But what little definite information there is on this point leads us to the belief that about as soon as men began to exchange things, and consequently to attribute *exchange value* to them, they began to use some kind of money — some commodity or commodities for which things were generally exchanged, and in terms of which the values of other things were generally stated.

The earliest forms of money were crude and simple, but they sufficed to meet simple needs. As exchange economy has advanced to the present complex division of labor, the monetary system has developed *pari passu*, the most conspicuous feature of this development in modern times being the growing importance of *credit* as a means of effecting exchanges. Industrial and commercial progress has led to monetary progress, and has, in turn, been stimulated and made possible by it.

Metallic Money. — The earliest and simplest forms of money were commodities. Particular commodities came to serve as money, not because they were arbitrarily designated as such by king or chieftain, but because they possessed some properties which made them exceptionally exchangeable. In some cases a primitive community came to use a commodity as money because it was something for which they had a dependable "foreign market" — something, that is, which they customarily sold to other communities in exchange for their products. In other

cases a commodity which a community did not itself produce, but which it got only in the course of trade with other communities, became the money commodity. Or, if for any reason a particular commodity came to be particularly esteemed as a mark of wealth or a badge of social prestige, it was likely to used as money. But whatever the original ground of the choice, a commodity which a community once began to think of as money had its exchangeability, and consequently its suitability for monetary uses, increased in a cumulative way, just as today most of us are willing to accept anything as money which we think we can use as money.

A great variety of commodities have at one time or another been used as money. Some typical examples are cattle, grain, furs, oil, salt, tobacco, ivory, shells, and tea. But with the advance of political and economic civilization the *metals* have, through the process of the survival of the fittest, proven themselves everywhere to be preëminently and indisputably the best money commodities. Copper, silver, and gold have each in turn been chosen as the principal money metal of the civilized world, the transition from the cheaper to the dearer metals indicating the growth of exchange and of wealth and the consequent need of larger money units.

Metals, and especially the precious metals, have certain qualities that give them a peculiar fitness to serve as money. They are durable, easily recognized and tested, and may be divided into homogeneous units of convenient form and weight. Moreover, as compared with most other commodities, the precious metals are relatively stable in value. This arises in part from their durability, for any one year's output of the mines makes but a comparatively small addition to the total stock of metallic money, and in part from the nature of their non-monetary uses, for the demand for commodities that minister to our tastes for ornament and display is much more elastic than the demand for necessaries of life.

Coinage. — When metals were first used as money, they passed from hand to hand simply by weight, or, in some cases, in the form of ornaments. Coinage speedily developed, however, as

a convenient way of certifying to the weight and fineness of money units.[1]

Such a guarantee is naturally of little avail unless it is generally recognized as authoritative. On this account the coinage of money has almost universally been regarded as a prerogative of the sovereign. In England, even under the divided sovereignty of the Middle Ages, the coining of gold and silver was generally a privilege belonging to the king alone. The lesser feudal lord and the chartered cities issued token coins, made of the baser metals, and intended especially for local use, but if they possessed the right of coining the precious metals, it was through a special grant of the king.

The Meaning of "Money." — In modern economic life many things in addition to coined metals are included, and properly included, under the name of money. There is, however, no definite line of demarcation between the things which are money and the things which are not money, consistently followed in common usage, or even in economic writings. But we may agree, to begin with, that money is what we exchange for things when purchasing them, and that sellers are willing to accept it, at stated prices, in exchange for their goods. Then, however, we have to take account of the fact that many exchanges are credit transactions; that is, that the immediate equivalent given in exchange for a thing is a promise to pay a certain amount of money. This suggests that we should distinguish between "money" and "credit instruments." But when we push our analysis a little further we find that the element of credit is found in many of the things that we ordinarily call money, even, as we shall see, in some kinds of metallic money.

A useful and important distinction, however, is implied in the very common practice of restricting the use of the name "money" to those *instruments of general acceptability which*

[1] The names of many ancient coins and of some modern ones are also the names of weights, although it has generally happened that through successive debasements of the coinage these names have lost their original significance. The Greek talent, the Jewish shekel, the Roman as, the Chinese tael, the English pound, and the French livre are familiar examples.

pass freely from hand to hand as media of exchange. The particular things thus to be counted as money vary for different periods and for different countries. In the United States this generally acceptable medium of exchange includes the metallic money coined by the federal government, the paper money issued by it, and bank notes. Checks drawn by individuals upon their bank accounts are not money, or money instruments, in this sense, because they do not pass freely from hand to hand as media of exchange. They can be used only in making payments to persons who have confidence in the honesty and solvency of the one who tenders the check for payment. Some things that are part of the generally acceptable media of exchange are themselves promises (on the part of the government or of banks) to pay certain other forms of money on demand. But the important point is that the acceptability of such things does not depend upon the honesty or solvency of the person who tenders them in payment. So long as we have confidence in the solvency of the government and the banks, their coins and notes, issued in convenient and easily recognizable forms and denominations, are generally acceptable media of exchange, and, as such, are money. This meaning of the word has the sanction of a very common and prevalent usage; it corresponds, moreover, to the technical definition given to the word by many economic writers, and to the official usage of the United States Treasury. In this chapter the word " money " will be employed in this *restricted sense* of money instruments of general acceptability.

But the word is also often used in a much broader sense. We speak of " money funds," the " money market," " money expenditures," " investments of money," etc. And yet the " money market " is not primarily a place in which the generally acceptable media of exchange are bought and sold, nor is the fact that one's " money expenditures " amount to a given sum to be interpreted as meaning that one has actually paid out this amount in the generally acceptable media of exchange. Money, in this broad sense, includes credit in the form of *rights to receive money* (in the narrower sense just defined) *on demand.* It is these rights that are bought and sold in the money market and

it is by transfers of these rights that a very large proportion of the aggregate annual payments for goods and services are made. A payment made by a bank check is, for example, a transfer of a right of this kind.

The Media of Exchange. — Some writers have made a distinction between the function which money performs as a *medium of exchange*, and its function as a *measure of value*. These are not, however, two different functions, but merely two different aspects of the same thing. By the very process of exchanging a commodity for money, we of necessity " measure " its value in terms of money, and only as a medium of exchange does money measure value. We may speak of a pound weight as an instrument used in weighing or as a measure of weight, but we would all recognize that these are merely two aspects of one function.

In the United States the actual media of exchange in terms of which we " measure values " (or more accurately, state prices) comprise a variety of coins, made from different metals, together with several kinds of paper money of many different denominations. But all these different forms of money are alike in name, — that is, they are dollars, or multiples or fractions of a dollar, — and moreover, these various kinds of dollars are not distinguished, one from another, in the price lists. This familiar and very satisfactory condition of uniformity in the units in which we state prices does not, however, suggest to us the real nature of money in the way that a less perfect monetary system would.

It would be possible to have a number of different monetary units, just as the weight or size of an object may be stated in terms of either the metric system or the English system of weights and measures. In fact, before the United States had an adequate monetary system of its own, the actual media of exchange consisted largely of English, French, Spanish, and Portuguese coins, and there were as many different ways of stating prices as there were varieties of money.[1] Nor does the mere

[1] An instructive bit of monetary experience may be found in the efforts of some of the colonies to reduce this foreign money, especially Spanish money, to the English system of pounds, shillings, and pence, in which accounts were generally kept. They were not content with a simple official statement of the actual ratios between the different value units, but sought to give an artificially enhanced value

name of " dollar " give to different pieces of money a uniform purchasing power. The silver dollar of Mexico will buy only about half as much as the silver dollar of the United States, although it is of approximately the same size. More significant, however, is the fact that in the United States we have had at different times " dollars " of unequal purchasing power.

What is it, then, that gives uniformity to the dollar as a price-recording unit in our present monetary system? To say that various kinds of money are equal in value because they will purchase the same amounts of goods is, obviously, to argue in a circle. But the answer is found in the fact that they are *interchangeable*, and so long as any number of kinds of money, all named in dollar units, are freely exchangeable, dollar for dollar, it is impossible that domestic prices stated in terms of one kind of money should be higher or lower than domestic prices stated in terms of any other kind of money. We do not refer here to the fact that different kinds of money are exchanged for each other at par in business transactions and in banking, for this is a result, rather than a cause, of their parity. The exchangeability that underlies the parity of our different kinds of money is maintained by the federal government.

All coins smaller than a dollar are by law exchangeable at the United States Treasury for " lawful money," which includes government notes, silver dollars, and gold coins. Government notes, in turn, are simply promises to pay, which are redeemable in gold at the government treasury. While there is no definite legal mandate requiring the redemption of silver dollars in gold, yet the currency act of 1900 makes it the duty of the Secretary of the Treasury to maintain all other forms of money at a parity with gold — a requirement which means that he would have to redeem silver dollars in gold if such action should at any time be

to the foreign coins by increasing the number of shillings to which they were to be considered equivalent. The result was not, however, an increase in the value of the coins, but a decrease in the value of the nominal "shilling" in which accounts were kept. This was the origin of the now rapidly vanishing use of the word "shilling" as equivalent to 12½ cents in some localities and to 16⅔ cents in others. The student may find an instructive parallel in this experience and the official statement of coin values by which sovereigns tried to retain their seigniorage profits.

MONEY IN THE UNITED STATES: JUNE, 30, 1915[1]

	IN TREASURY, MINTS, AND FEDERAL RESERVE BANKS	IN OTHER BANKS AND IN CIRCULATION	TOTAL
Gold coin and bullion	$1,395,405,553	$590,133,619	$1,985,539,172
Silver dollars	503,624,499	64,647,156	568,271,655
Subsidiary silver	26,164,295	159,265,955	185,430,250
Total metallic	$1,925,194,347	$814,046,730	$2,739,241,077
United States notes	$14,338,770	$332,342,246	$346,681,016
Federal reserve notes	3,885,850	80,374,650	84,260,500
National bank notes	33,880,546	785,393,047	819,273,593
Total notes	$52,105,166	$1,198,109,943	$1,250,215,109
Aggregate metallic and notes	$1,977,299,513	$2,012,156,673	$3,989,456,186
Gold certificates	$100,861,170	$1,072,847,819	—
Silver certificates	11,488,605	481,970,395	—
Treasury notes of 1890	9,313	2,244,687	—
Total certificates and notes	$112,359,088	$1,557,062,901	—
Aggregate[2]	—	$3,569,219,574	$3,989,456,186

needed to maintain their parity. Gold certificates and silver certificates are simply a mechanism for putting gold and silver money into circulation in convenient form. They are analogous to warehouse receipts, because they represent gold coins and silver dollars that are stored in the government treasury to the full amount of the certificates issued, and which may be obtained at any time in exchange for the certificates. Bank notes (including federal reserve notes and national bank notes) are redeemed by the federal treasury, which for this purpose acts as an agent of the banks which have issued the notes. In practice the government is continually receiving all kinds of money, including silver dol-

[1] *Finance Report*, 1915, p. 314.

[2] This aggregate does not include "minor coins," principally bronze one-cent pieces and nickel five-cent pieces, of which there were about $60,000,000 outstanding on June 30, 1915.

lars, and exchanging other kinds of money for them. *The significant thing is that all other kinds of money are exchangeable, directly or indirectly, for gold coin.*

The Monetary Standard. — In the case of gold coin, there is a further kind of exchangeability — *the unlimited and free convertibility of gold coin and gold bullion.* So long as any one can secure gold coin from the mints in any amount for the same weight of gold bullion of standard fineness, and so long as gold coin can be freely melted down into gold bullion, it is impossible that there should be any appreciable difference between the value of a gold coin and the value of its metallic content. We have, then, not only the interchangeability of all parts of the circulating medium, but also the positive physical identity of one part of it and the material of which this part is made.

Gold coins, because their value as bullion is equal to their value as coins, constitute *standard money.* The gold dollar weighing 25.8 grains, and containing 23.22 grains of fine gold is by law the *monetary unit,* that is, the dollars in terms of which prices are stated are gold dollars or are maintained at a parity with gold dollars. The coinage of the gold dollar was discontinued in 1890, but the gold coins that are minted contain precisely this amount of gold per dollar. Gold, whether in coin or bullion, constitutes the *monetary standard,* for the value of any dollar must be equal to the value of the gold in a gold dollar. The recording of prices in terms of dollars through the exchange of goods and services for money of different sorts, the maintenance of the parity of dollars in all varieties of money through their exchangeability, and the automatic equating of the value of the dollar to the value of 25.8 grains of gold bullion; — these are the fundamental facts of our monetary system.

Seigniorage. — Sovereigns have in the past very often viewed the monopoly of coinage as an opportunity for personal profit. By calling in the stock of metallic money in the country for recoinage, they have frequently reduced the weights of coins without changing their names, thus increasing the number of coins, so that a handsome profit was netted for the royal treasury. Debasement of the currency was a favorite financial expedient

of Henry VIII, of England, and of Philip the Fair and Louis XIV, of France.

Somewhat less reprehensible in theory, although amounting to about the same thing in its effects, was the common practice of making a charge for the coinage of standard money, called *seigniorage*. This practice was based on the idea that it was possible to maintain a difference between the value of a coin and the value of the bullion put into it.[1] A great deal has been written about the possibility of seigniorage, for the subject is one that involves considerations that are fundamental in monetary theory. It has been often said, for example, that it is the "government stamp," rather than the metallic content, that gives value to a coin. Leaving aside the matter of limited or subsidiary coinage (which will be considered presently), we may dispose of this statement by saying that if it means that the use of certain metals as money creates a demand for them that would not otherwise exist and thus increases their value, it is a truism; but if it means that in coinage we can add an arbitrary and intangible element of value to the value of the metallic content of standard coins, the statement is a misleading doctrine that has been disproved by the monetary experience of almost every country.

There is, however, a stronger statement of the theory of seigniorage. If the only way in which I can convert bullion into a medium of exchange is by being content with 750 ounces of money for every 1000 ounces of bullion I take to the mint, will not the coins have a value one third greater than that of the metal they contain? May not their "metallic content" be said to be, in a figurative sense, one third more than their weight because they cost me that much more in bullion? If their bullion value sinks below this point, bullion will not be brought to the mint, as it will be worth more than the coins one can get for it; just as when the value of the coins rises above this point the supply of bullion would be stimulated so that as a result the value of the coins would tend to maintain this fixed relation

[1] Under Philip the Fair, the seigniorage charge went as high as 50 per cent. Charges of from 2 to 15 per cent were more common.

to the value of bullion. As a matter of fact, it is probable that in a completely isolated community a strong and stable government could, through wise and careful regulations, maintain a constant rate of profit on the coinage, without endangering the stability of the monetary system.

The fundamental difficulty with seigniorage, however, was found in practice to be that in foreign trade coins passed current only as bullion, so that when seigniorage was charged, the prices of imported goods, expressed in money, were necessarily higher than their prices expressed in bullion, by an amount equal to the seigniorage. It was impossible that one ratio of exchange could long be maintained between coined money and bullion in domestic trade and another ratio of exchange in foreign trade. The interdependence of the prices of all kinds of goods prevented that. Money prices, in general always rose; that is, the value of the coins sank to the level of the value of the bullion they contained. Under these conditions no one would voluntarily undergo the loss inseparable from taking bullion to the mint for coinage, and with the cessation of coinage the profits from coinage stopped. Every possible expedient, short of the absolute prohibition of foreign trade, was tried by sovereigns in their efforts to retain their profits.[1] But market forces were found to be stronger than royal regulations, which at best only served to retard somewhat the depression in the value of the official coinage. About the only effective way of getting profits from the coinage was for the sovereign to admit that the coins in circulation possessed only their bullion value, and then to call in the currency for recoinage into smaller pieces, in the manner that has already been mentioned, thus starting afresh with a new

[1] The use of any other circulating medium than the official one was prohibited; no one was allowed to sell imported gold or silver, whether in bullion or coin, save to the royal mint; if there were mines within the country, they were sometimes prohibited from disposing of their products except to the royal mint; goldsmiths were forbidden to melt down coin or to purchase more bullion than they needed, and this they were forbidden to buy at less than the mint price; restrictions were placed on the export of bullion; these and other similar methods were tried, but all to no avail. Cf. W. Lexis, article "Münzwesen," in *Handwörterbuch der Staatswissenschaften*.

seigniorage charge. The result was invariably a repetition of the process of a more or less rapid depreciation in the purchasing power of the coins, leading often to further debasements of the currency.

Modern nations have abandoned the attempt to secure profits from their monopoly of the coinage. Since 1666 England has made no charge whatever for coining bullion into standard money.[1] Most of the countries of continental Europe make a charge just sufficient to cover the expense of coinage. This charge is sometimes called seigniorage, but it is usually, and more properly, called *brassage*. The United States made no coinage charge until 1853, when a charge of one half of 1 per cent was made for coining standard money. This was reduced in 1873 and was abandoned entirely in 1875. At present the United States exchanges gold coins, weight for weight, for bullion of standard fineness (nine tenths gold, one tenth copper) brought to the mint in lots of one hundred dollars or more in value. For crude bullion, or bullion not of standard fineness, gold coins are exchanged containing as much fine gold as is contained in the bullion, less a trifling charge for assaying, refining, and for the alloy.[2]

Instead of viewing coinage as a profitable prerogative of the government, we have come to view it as a government duty, to be performed at government expense. The question of seigniorage versus gratuitous coinage is no longer a live issue. But the student who has grasped the significance of the lesson contained in

[1] In practice most of the gold bullion coined in England is supplied to the mint by the Bank of England, which is required by law to purchase it at the minimum price of £3 17*s.* 9*d.* per ounce. An ounce of bullion makes £3 17*s.* 10½*d.* in gold coin, the difference going to compensate the bank for the delay involved in getting the bullion coined at the mint. In the United States the waiting devolves upon the government, for gold coins, or, at the option of the depositor, checks upon United States subtreasuries or upon depository banks are paid to depositors as soon as their bullion can be weighed and assayed.

[2] The coinage mints are at Philadelphia, San Francisco, and Denver. In addition there are bullion-purchasing mints (not now operated as coinage mints) at New Orleans and Carson City, and assay offices at New York, Boise, Helena, St. Louis, Deadwood, Salt Lake City, and Seattle, which receive bullion on the same terms as the mints, plus an additional charge of one eighth of 1 per cent.

the history of seigniorage has taken an important step toward the understanding of monetary theory. The coinage of standard money is now in law, and always has been in fact, a device for dividing the standard money metal into convenient units of certified weight and fineness.

Limited Coinage. — Gold is the only metal which is made into coins by the United States government for any one who deposits bullion at the mints or assay offices. All other coins are made from metal purchased from time to time for that purpose as Congress may direct. In none of these coins is the bullion worth as much as the coin. In 1878, when the United States began the limited coinage of silver dollars, the value of the $371\frac{1}{4}$ grains of pure silver in a silver dollar was about 89 cents. The value of silver declined steadily until 1902, when $371\frac{1}{4}$ grains of silver were worth only 41 cents. Since that time there has been a slight upward movement, but nevertheless in 1915 the bullion value of a silver dollar was only about one half its value as a coin. The bullion value of the smaller silver coins is still less, for they contain but 347.22 grains of silver to the dollar, while the bullion value of our nickel and bronze coins is yet smaller, relatively.

Such coins are sometimes called " token coins," the implication being that the fact that they pass from hand to hand at their full nominal value is merely a matter of habit or usage, supported by general acquiescence. More accurately, however, they are credit coins, because the excess of their coin value over their bullion value depends ultimately, as we have seen, upon the good faith and credit of the government, evidenced by their redeemability in gold. If, for example, a catastrophe should overthrow the present federal government, and if the new government should refuse to recognize the obligations of the old, nothing could prevent these coins from sinking to their bullion value.

A very considerable profit accrues to the government from this limited coinage. The difference between the amount paid for silver bullion from 1878 to 1907, and the value of the coins made from it, amounted to $143,000,000. In the accounts of the federal treasury this profit is called seigniorage, but it should be carefully distinguished from real seigniorage, — a charge ex-

acted for the conversion of standard bullion into standard coin. If the federal government should issue a general balance sheet of the kind used in corporation accounting, the credit element in its outstanding limited coinage would properly appear as a liability, which might be greater or less than the profits that had accrued on such coinage, depending upon whether the present value of the bullion in the coins happened to be greater or less than the prices which the government had paid for it.

Bimetallism. — A monetary system like the present one of the United States is a *single standard* system, because only one commodity is used as a monetary standard. The *double standard* system, under which two different commodities serve concurrently as legal monetary standards, has, however, been used in the past by many governments, including our own, and its superiority over the single standard system has been alleged by many advocates. Practically the only commodities that civilized nations have used as monetary standards in modern times are gold and silver. The question of the double standard resolves itself, accordingly, into the question of the bimetallic standard, which means in practice the unlimited coinage of both gold and silver.

Bimetallism does not mean, in theory, as might be supposed, the establishment of two different monetary units of different names, one defined as a certain amount of silver, the other defined as a certain amount of gold, prices being stated according to convenience in terms of either unit. On the contrary, it contemplates the establishment of one nominal unit, such as the dollar, to be defined at the same time as either a definite amount of gold or a definite amount of silver. More concretely, this means the opening of the mints to the unlimited coinage of both gold and silver into dollars, or dollar multiples, the amount of silver in a silver dollar and the amount of gold in a gold dollar being established by law.

Many of the arguments that have been advanced by bimetallists have related to the alleged immediate advantages to be secured from the adoption of the double standard under particular conditions of time and place. One argument, however, of more general significance is based on the probable greater stabil-

ity of prices under the double standard. Silver and gold are produced under somewhat different conditions, and are used for somewhat different purposes. It has been maintained that tendencies toward fluctuations in prices stated in silver and in prices stated in gold would, therefore, be as apt to be in opposite directions as in the same direction, and that so far as they were in opposite directions they would tend to counterbalance each other.

Most opponents of bimetallism, while admitting that, if feasible, it might possess some advantages, deny its possibility. The difficulty is, they maintain, that while the ratio of the weight of gold in the monetary unit to the weight of silver in the monetary unit has to be fixed and definite, the ratio at which gold exchanges for silver is not fixed and definite, but is subject to the fluctuations of the market. If one metal is relatively underappraised and the other relatively overappraised by the legal ratio, the result will be that only the overappraised metal will be brought to the mint for coinage, for the underappraised metal will be worth no more than the overappraised one as coin, but will be worth more as bullion. The actual result will be, in such a case, not a bimetallic standard, but a single standard composed of the metal which, at the mint ratio, is the cheaper. Moreover, if, by a change in the market ratios of exchange of the two metals, this one in turn becomes underappraised by the mint ratio, the standard coins composed of that metal that are already in use will disappear from circulation, being hoarded, melted down, or exported, and the other metal will take its place as the actual standard of value.

The opponents of bimetallism claim, in short, that it encounters a formidable obstacle in the principle known as *Gresham's law*, which is usually summarized with rough accuracy in the statement that "bad money drives out good," or that "the cheaper money drives out the dearer." More definitely, this means that domestic payments will be made, as far as possible, in the money which can be used to less advantage for other purposes, and that no one will exchange relatively expensive bullion for coins at the mint when coins of an equal nominal

value and (for most purposes) of equal purchasing power can be obtained in exchange for relatively cheaper bullion. Sir Thomas Gresham is said to have come to this conclusion as a result of his observations of the difficulties encountered by Queen Elizabeth in her attempts to improve the condition of the debased, worn, and mutilated coinage bequeathed to her by her predecessors. But the operation of the principle had previously been noted by various writers.

All but the most extreme bimetallists would admit the impossibility of establishing and maintaining a coinage ratio between the two metals that would differ by any wide margin from the initial ratio at which they exchanged in the market, but they maintain that a mint ratio established as nearly as possible to the prevailing market ratio will have a steadying influence upon the latter that will tend to prevent any wide divergence between the two. If the market ratio should change to such an extent that it would not pay to use one of the metals as money, more of the other metal would be used for monetary purposes, thus decreasing the supply of it available for other uses and consequently enhancing its relative value. The net effect of this "compensatory action of bimetallism" would be, it is claimed, a tendency toward the equilibrium of the market ratio of exchange of the two metals at the coinage ratio.

The appeal to history has been used both by bimetallists and their opponents. The claim of the monometallists that legal bimetallism is apt to mean actual monometallism, with the relatively cheaper metal as the standard, has been substantiated many times in the monetary experience of different nations. The automatic change from one single standard to the other, following a change in market rates of exchange, is also a phenomenon that has been illustrated by a large number of concrete cases. On the other hand, the bimetallists are able to point to some fairly successful bimetallic systems, such as that of France in the first half of the nineteenth century. But it is a significant fact that no real bimetallic system has been able to endure for any considerable time except when the annual production of gold and silver was relatively small and relatively stable,

and where international trade was a relatively unimportant item. There is no scientific student of monetary problems who believes that it would be possible for any nation independently to maintain the double standard under the present conditions of a large and fluctuating annual production of the precious metals, coupled with an international commerce of vast proportions.

International bimetallism, that is, the adoption by most of the leading nations of a bimetallic standard, at a ratio fixed by international agreement, has had many supporters, even among those who do not believe in the practicability of national bimetallism, and representatives of different nations have assembled in several international monetary conferences for the discussion of this subject. International bimetallism would remove one difficulty experienced in the attempts made by different nations to maintain independent bimetallic systems at even slightly differing ratios, — and that is the tendency for each metal to flow from the countries in which it is relatively underappraised in the mint ratio to the countries in which it is relatively overappraised. Other difficulties, however, would still remain, and the possibility of maintaining an actual bimetallic standard even under international agreement, supposing that were possible, is open to very serious doubt.

The waning of public interest in the question of bimetallism in recent years is of great significance, because it indicates that the real moving forces behind the bimetallist propaganda have not been any real or assumed points of superiority of general significance that may be imputed to a double standard, but rather that certain specific results that would flow from the adoption of bimetallism at a particular time and place have been desired. More specifically, bimetallism has been supported by those who have desired " cheaper money," and these have been particularly active when the money in actual use has been increasing in its purchasing power, that is, when prices in general have been decreasing. The recent great increase in the world's production of gold has, temporarily at least, taken bimetallism out of the list of economic problems of general public interest.

Bimetallism in the United States. — The national monetary

system was established by act of Congress in 1792.[1] The mint was opened to the free and unlimited coinage of both gold and silver, the silver coins containing $371\frac{1}{4}$ grains of fine metal per dollar, and the gold coins $24\frac{3}{4}$ grains per dollar, the ratio of 15 to 1 being thus established. It was soon found, however, that gold was worth in the market slightly more than fifteen times as much silver, and as a consequence but little gold was brought to the mint for coinage, while such gold as was coined illustrated Gresham's law by speedily disappearing from circulation.

Silver dollars, too, disappeared from circulation, but for another reason. They were somewhat lighter than the Spanish dollars which were in general circulation at the time, and would, under the operations of Gresham's law, have driven the latter out of circulation, had it not been that the Spanish dollar commanded a slight premium over the American dollar in ordinary purchases. But the American dollars, on account of their new and attractive appearance, could be used as advantageously as the Spanish dollars in trade with the Spanish possessions in America. They were consequently taken from the country for that purpose, while Spanish dollars were brought back and were sometimes recoined into a larger number of American dollars. This wasteful coinage of silver dollars was stopped in 1806 by order of President Jefferson, leaving the mint open to the coinage only of gold, smaller silver coins, and minor coins. As a matter of fact American coins made up only an insignificant part of our circulating medium before 1834.

Realizing the impossibility of maintaining a gold coinage under such conditions, Congress, in 1834, changed the legal ratio to 16 to 1 by reducing the weight of the gold dollar. By this step, however, it went too far in the other direction, for gold was not worth in the market quite sixteen times as much as silver, and while the number of gold coins increased, but little silver was brought to the mint, and silver coins quickly disappeared from circulation. In order to secure a supply of small change, Congress was forced, in 1853, to abandon the principle of the un-

[1] The act of 1792 followed in detail the recommendations of a Report on the Establishment of a Mint, by Alexander Hamilton, then Secretary of the Treasury. Hamilton incorporated some of the recommendations contained in earlier reports by Robert Morris and Thomas Jefferson. Hamilton's Report has been frequently reprinted, but it, together with the reports of Morris and Jefferson and other pertinent documents, may be conveniently found in the *Report of the International Monetary Conference of 1878*.

limited coinage of silver coins smaller than a dollar, and to order that they should be coined, as at present, only from bullion purchased by the government at the market price. At the same time the weight of these subsidiary coins was reduced by one seventh to insure their being retained in circulation.

The discovery of gold in California, in 1848, and in Australia, in 1851, suddenly increased the world's supply of gold by an unprecedented amount. In fact, the careful estimates of Dr. Soetbeer indicate that as much gold was produced in the third quarter of the nineteenth century as in the preceding three centuries and a half following the discovery of America. The result was to increase the discrepancy between the mint ratio and the actual market ratio of exchange of gold and silver, although the production of silver had also been greatly increased. Gold was brought to the mint for coinage in enormous amounts — a condition that lasted even after 1861, when paper currency began to be used almost exclusively as the medium of exchange.

In a general revision of the coinage laws, enacted in 1873, the silver dollar was dropped from the list of coins that could be manufactured at the mint. Although this action was almost unnoticed at the time, a fictitious significance has, in subsequent years, been attached to it. Silver was practically "demonetized," that is, its free and unlimited coinage was actually prevented, by the establishment of the ratio of 16 to 1 in 1834. The act of 1870 gave legal recognition to an existing fact.

But a sudden depreciation in the value of silver, which began at about this time, brought the question of bimetallism again into the foreground. Since the seventeenth century the market ratios of gold and silver had fluctuated only between relatively narrow margins, and in no year since the establishment of the United States mint had the average annual price of an ounce of gold been less than 15 or more than $16\frac{1}{4}$ times the price of an ounce of silver. In 1875, however, the market ratio fell to 16 to 1; by 1878 it was 18 to 1; by 1886 it was 20.8 to 1; and in 1894 it was 32.6 to 1.[1] It is evident that if the opportunity for

[1] The causes of this unprecedented decline in the relative value of one of the precious metals were complex and intricate. The following may be mentioned,

the free and unlimited coinage of silver at the ratio of 16 to 1 had still existed, there would have been another sudden change in the actual monetary standard. Gold would have been under-appraised by that ratio, and would have disappeared from circulation, and silver would have taken its place. It was the realization of this fact, coupled with the knowledge that the silver standard would mean a "cheaper dollar," that led to a popular agitation for the free and unlimited coinage of silver which continued for more than twenty years.

The first tangible result of this agitation was a compromise measure, the Bland-Allison Act, passed by Congress in 1878, which instituted the limited coinage of silver dollars by authorizing the Secretary of the Treasury to purchase at market prices not less than $2,000,000 nor more than $4,000,000 worth of silver bullion per month, and to coin it into dollars. The results of this enforced coinage were satisfactory to neither party to the controversy. The amount of silver coined was in excess of the demand for that bulky kind of money, even though as much as possible was put into circulation in the form of silver certificates, and although the government tried to favor the distribution of silver by paying the expense of transporting it to the localities where it was wanted. The movement in favor of the unlimited coinage of silver continued to gain in strength, however, its advocates claiming that "more silver," rather than less, was needed.

A second compromise was effected in the Sherman Silver-Purchase Act of 1890, which provided for an increase in the amount of silver purchased to 4,500,000 ounces each month, which was to be paid for in treasury notes. These treasury notes were to be full legal tender, and were redeemable in gold or silver coin at the discretion of the Secretary of the Treasury. The silver was to be coined only so rapidly as was found necessary for the redemption of the treasury notes. The increase in the amount

however, as contributing circumstances: (1) Cessation of an extraordinary demand for silver in India which had existed since 1850; (2) Stoppage of the unlimited coinage of silver in several European countries; (3) Discovery of large silver mines in the United States; (4) Increase in the value of gold, as evidenced by a general decrease in the prices of commodities.

of silver purchased was a concession to the advocates of the unlimited coinage of silver; the fact that the circulating medium based immediately on these purchases was composed of treasury notes, which were injected into circulation in proportion to the *market price* of the silver purchased, was a concession to their opponents.

The soundness of the principles embodied in the Sherman Act was soon tested by a period of financial and industrial depression. Gold had to be exported to Europe in large quantities to settle an adverse balance of trade, and the government found difficulty in maintaining its own gold reserve, which was already seriously threatened by a decline in customs receipts, accompanied by an increase in federal expenditures. The gold reserve was at that time simply the amount of gold in the treasury that was available for the redemption of other forms of money, — especially the United States notes, or greenbacks, that had been first issued during the Civil War, but which did not become actually redeemable in gold until 1879. During this scarcity of gold the banks were able to secure gold for their own reserves or for export by presenting United States notes at the treasury for redemption in gold. Under the law the notes had to be immediately reissued, and were used in government payments, but no sooner was this done than they were again returned by the banks for redemption in gold.

The workings of this "endless chain" by which gold was pumped from the government treasury were aggravated by the fact that the treasury notes authorized by the Sherman Act were used for the same purpose. Although they were payable either in gold or silver coin, they were actually redeemed on demand in gold. This was at the urgent insistence of President Cleveland, who believed, with good reason, that a refusal to redeem them in gold would probably have forced the silver standard upon us, by destroying the exchangeability of silver and gold and thus putting an end to their parity, and that it would certainly have injured the credit of the government and put it to a disadvantage in the bond sales that were needed to replenish the gold reserve. Under the operations of the Sherman Act

the government was virtually exchanging gold coin for silver bullion at a time when gold was sorely needed when the gold value of the purchased silver was steadily depreciating.

The gold reserve sank from $190,000,000 in 1890 to $95,000,000 in 1893. In June of the latter year the closing of the mints of India to the unlimited coinage of silver gave an added impetus to the downward movement of the price of that metal. These facts led Congress, in a special session called in 1893 for that purpose, to order, though with obvious reluctance, that the purchase of silver under the Sherman Act should be stopped.

The agitation for the free and unlimited coinage of silver continued, however, and with increased vigor, and it was made the sole issue in the presidential campaign of 1896. It was alleged that the yet continuing industrial depression could be alleviated only by "more money" and "cheaper money." It was claimed by many intelligent people that the unlimited coinage of silver would not drive gold from circulation, but would increase the value of silver and decrease the value of gold until they met at a parity established by the desired legal ratio of 16 to 1. The most effective argument of the protagonists of silver was found, however, in the admitted fact that the value of gold, as shown by changes in the general price level, had been increasing. All indications pointed toward a continued decrease in the annual production of gold, and a consequent further decrease in prices. This, it was argued, was a hardship to those who had borrowed money on long time obligations, such as mortgages, because they would be forced to repay in value or purchasing power more than they had borrowed.[1]

This agitation was, in fact, simply one of a series of cheap money movements that have characterized the economic development of the United States, and which have sprung from the fact that the opening up and developing of new lands have called for expenditures in amounts far beyond the resources of the actual settlers. Newly settled regions have usually been debtor regions, and there is more than mere coincidence in the fact that demands for cheap money have always been voiced most loudly on the frontier.[2] This does not mean that a cheap money movement is essentially dishonest; that it represents the conscious attempts of debtors to escape the payment of their lawful debts. The life and vigor in this movement for the unlimited coinage of silver was put into it by men who saw the imputed value of their assets sinking and the difficulty of paying their debts increasing in a financial crisis for which they were not individually responsible. Money funds were

[1] This argument raises the problem of the *standard of deferred payments*, which is to be considered in Chapter XVI.

[2] Cf. C. J. Bullock, *Essays in the Monetary History of the United States*, Part i.

hard to get because personal credit, the foundation of bank credit, was lacking. This scarcity of money funds was confused, naturally, if erroneously, with the scarcity of "money" in the sense of standard money, — gold; and the remedy was sought in an action that would give more and cheaper standard money.

The defeat of the advocates of bimetallism in 1896 would probably not have stopped the agitation for the unlimited coinage of silver, had it not been for the return of prosperous conditions, coupled with an enormous increase in the world's annual production of gold, which has brought with it a general increase in prices.

The single gold standard was formally and definitely recognized by law in 1900. All of the silver bullion purchased under the Sherman Act has been coined, and silver dollars sufficient in amount to retire the treasury notes have been set aside for that purpose. These treasury notes (which should not be confused with the United States notes, or greenbacks) are accordingly on substantially the same basis as silver certificates. Up to June 30, 1915, their amount had been reduced from $156,000,000 to $2,250,000. No silver dollars have been coined since 1904, and under the present law no more can be coined unless Congress should authorize the special purchase of bullion for that purpose.

The Gold-Exchange Standard. — Within the past twenty years gold has been accepted more generally and more definitely than ever before as the standard money metal of the world. The change from a silver standard to the gold standard is often a difficult and expensive national undertaking, but it brings the advantages of a more stable unit of value and of increased facility in making international payments. In 1915 the silver standard prevailed only in China, Persia, Paraguay, and three Central American countries.[1]

In a number of places in which it is impossible, for one reason or another, to introduce gold as part of the actual medium of exchange, the silver standard has been replaced by the *gold-exchange standard*. Where this standard exists the currency of the country consists largely of silver coins, put into circulation by a system of *limited coinage*. These coins are maintained at a fairly definite gold value, higher than that of their bullion

[1] Report of the Director of the Mint, in *Finance Report*, 1915, p. 456.

content. This is not accomplished, however, by making them always and necessarily redeemable in fixed quantities of gold. Instead the government agrees to sell exchange on one or more gold-using countries at a maximum fixed price in terms of the local coins.[1] That is, while the local currency is not necessarily redeemable in gold within the home country, it is redeemable in bills of exchange or drafts payable in gold in some foreign country. It is necessary, of course, for the home government to maintain funds for this purpose in a gold-using country. The gold-exchange standard has been adopted in India, the Philippines, Mexico, Panama, Siam, Indo-China, the Straits Settlements, and (in a modified form) in Java.

Where carefully administered it has worked well, and has brought to the countries using it practically all of the advantages of the gold standard without the expense of introducing and maintaining a gold currency and sometimes without making it necessary for the people to familiarize themselves with a new kind of money. It has even been suggested by certain writers that the great nations of the world might wisely adopt the gold-exchange standard, making their local currencies redeemable at fixed rates in drafts upon some one country in which the bulk of the gold reserves of the world would be kept. A change like this is impracticable so long as wars, with their interruptions of international commerce and international gold payments, remain possible. Nor would it be particularly advantageous. The general adoption of the gold-exchange standard would, it is true, greatly decrease the amount of gold needed to carry on the world's business transactions *at present prices*. But the ultimate result, there is good reason to believe, would merely be a

[1] Since 1893 the mints of India have been closed to the free coinage of silver. Silver rupees, coined from bullion purchased by the government, are now maintained at a gold value of approximately one shilling and four pence per rupee by the government's practice of selling, when necessary, bills of exchange payable in London at a price not higher than 1*s.* $3\frac{29}{32}$ *d.* per rupee. The peso of the Philippines, containing only about three fourths as much silver as the silver dollar of the United States, is maintained at a gold value of approximately fifty cents by the insular government's accepting it at that price (minus a small charge) in exchange for drafts payable in New York.

general increase in prices, so that the aggregate volume of payments (measured in money units) would increase and more gold would be needed in the world's gold reserves. The world *as a whole* does not profit by " economizing in the use of gold," even though particular countries may be able to save by avoiding the expense of introducing a gold currency.

Government Paper Money. — In metallic money of limited coinage, there is, as we have seen, a considerable element of credit. In paper money the element of credit is alone present. Government paper money is composed of instruments which bind the government to pay, and usually to pay on demand, equivalent amounts of metallic money, — usually standard money.

Government paper money also differs from metallic money of limited coinage in respect to the motives which gives rise to and regulate its issue. Subsidiary coins are issued by the government in response to the demand for circulating medium for use in small transactions and in making change. The public convenience is the first consideration; the profit accruing to the government on such coinage is a secondary thing. In issuing government paper money, however, fiscal motives have predominated. When hard pressed to swell the government income to cover an increase in expenditures, those responsible for the financial policies of a government have often deemed it advisable for the government to make use of its own notes, *promises to pay*, in discharging its obligations.

These differ from government bonds, which are often issued in similar circumstances, in that the bonds bear interest, are sold to voluntary buyers, and are usually payable at a definite time in the future, while government notes are usually non-interest bearing, represent a *forced* rather than a voluntary loan, and are usually, in form at least, payable on demand, or in practice, at an indefinite time in the future. They are, moreover, issued in convenient form for monetary use, and are usually made legal tender, so that they pass from hand to hand as a medium of exchange. The forced loan which they represent is therefore shifted from those who first receive the notes from the government for their goods or their services.

Colonial and Revolutionary Bills of Credit. — Paper money issues have frequently been used in the United States as a means of meeting fiscal emergencies, especially those springing from the extraordinary expenditures occasioned by wars. The expense of sending troops to the Indian wars was one of the things that led most of the American colonies to issue paper money. The history of these colonial " bills of credit," as they were called, illustrates two dangers that seem to be inseparable from the use of this financial and monetary device. In the first place, it was very easy to succumb to the temptation of paying ordinary as well as extraordinary expenditures in this easy way. Some of the colonies got entirely out of the habit of taxing themselves to meet current public expenses. The refusal to levy taxes was a prolific cause of disputes between colonial assemblies and royal governors.

In the second place, because no money was raised for the purpose, these bills of credit were not redeemed promptly. Their purchasing power fell because people lost confidence in their redeemability. As prices rose it took continually larger issues to meet the government expenditures, and each increase in the amount in circulation led to a further fall in purchasing power. After the currency had become practically worthless, it was a common practice to repudiate it in whole or in part, and to start afresh with bills of a " new tenor." Any attempt to restrict this reckless use of public credit was met with determined resistance from the " cheap money " advocates of that day. There were frequent complaints of the scarcity of money, especially from the more newly settled districts. The greater the quantity of money issued, the more insistent was the demand for still further issues. In short, this colonial experience in itself gives sufficient basis for the inference that from the monetary as well as the fiscal point of view, the use of paper money easily degenerates into a bad habit.

Again, in the Revolutionary War, paper-money issues were made, — this time by the Continental Congress as well as by the individual colonies. The Continental Congress was really driven to this action by its lack of the power of levying taxes.

Its bills became practically worthless, although every effort was made to maintain their parity with metallic money by appeals to patriotic sentiment. After the formation of the national government a few of them were redeemed at one cent on the dollar.

It was our unfortunate colonial and revolutionary experience with paper money which led to the insertion of the wise provision in the federal Constitution which forbids the individual states to issue bills of credit or to made anything but gold and silver legal tender in payment of debts.

The Greenbacks. — The federal government made no important issues of paper money until the Civil War.[1] It was not generally foreseen that that conflict would be so long continued and intense as it was, and Congress consequently neglected to make adequate provision for taxes that would help to meet the increased expenditures and to sustain the government credit in the borrowing operations that were necessary. In 1861 the Secretary of the Treasury was authorized to issue at his discretion $50,000,000 in " demand notes," which, although they were not legal tender, could be used in all payments to the government. These were redeemed promptly on demand until the end of the year, when the withdrawal of gold from the banks by depositors for hoarding, and by the government for its own uses, led first the banks and then the government to suspend specie payments, — that is, to refuse to pay their current obligations in gold.

In February, 1862, moved by the absolute necessity of providing some kind of money for the federal treasury, Congress authorized the issue of $150,000,000 in legal tender notes,[2] or greenbacks, as they came to be called. It was hoped, moreover, that this increase in the circulating medium would improve the market for government bonds for which the greenbacks were at first made convertible at par. This action was not taken without

[1] The federal government issued treasury notes in the war of 1812 and the Mexican War, and during the panics of 1837 and 1857. Most of these issues were interest bearing, however; in no case were they legal tender, nor did they get into common use as media of exchange.

[2] Including the "demand notes," which were now made legal tender.

strenuous opposition on the part of those who foresaw some of the disastrous consequences of large paper money issues. But as in earlier American experience with paper money, succeeding issues met with less and less resistance. All together, greenbacks to the amount of $450,000,000 were issued during the war.

It was the general expectation when the greenbacks were issued that they would be retired as soon as possible after the conclusion of the war. But when such action became possible, it was opposed by many who thought that the reduction of the circulating medium would decrease prices, impose additional burdens upon debtors, injure business interests, reduce the public revenues, and hamper the government in the refunding of its public debt. In 1866, however, Congress authorized the gradual retirement of the greenbacks, but repealed the act in 1868. The amount in circulation in 1874 was $282,000,000, and in that year a bill requiring the definite increase of the issue to $400,000,000 was prevented from becoming law and thus establishing a dangerous precedent only by the veto of President Grant. Some greenbacks were retired under the provisions of an act of 1875, but in May, 1878, there were $346,681,000 outstanding, and as a law then enacted provides for their constant reissue after being received or redeemed at the treasury, the amount still stands at that figure.[1] The part that they played in the financial difficulties of 1890–1893, together with the history of the treasury notes of 1890, has been described in connection with the discussion of bimetallism.

At present the greenbacks constitute a useful and acceptable part of the stock of money. But if another financial crisis should deplete the government treasury, they would very likely prove again to be a source of difficulty. Their retirement is feasible under present conditions, but would be most difficult to accomplish under the very financial conditions under which they would be most dangerous. The currency act of 1900 provides for a gold reserve of $150,000,000, to be held against them to insure their redeemability. If the reserve falls below $100,000,000, the Secretary of the Treasury is directed to replenish it from the

[1] Since 1900 they have been reissued only in exchange for gold.

proceeds of bond sales. Although this gold reserve also constitutes part of the real security behind our silver dollars, it could safely be diminished in amount if the greenbacks were retired. Moreover, if a great national emergency should ever again make the issue of government paper money necessary, it would be highly advantageous to have the greenbacks out of the way.

Economic Effects of the Greenbacks. — The greenbacks are in form promises to pay, but they are not promises to pay on demand, nor at any specific time. During the period of the suspension of specie payments they were not actually redeemable in gold, nor was gold in general circulation as a medium of exchange except on the Pacific coast. Gold was, however, in addition to its industrial uses, employed as money in international trade, in the payment of interest on government bonds, and for customs duties (for which the greenbacks were not legally receivable). There was thus a constant demand for gold money, which was met by its sale as a commodity in the New York market. The gold market was highly speculative, the daily and even the hourly fluctuations in the price of gold in greenbacks being considerable. Notwithstanding these speculative features the prices paid for gold indicated very accurately, in the long run, how much, in the expert judgment of market specialists, the greenbacks should be discounted as compared with gold.

Everything that was thought to affect the probability of the ultimate redemption of the greenbacks in gold influenced their price. Among these factors were the quantity of greenbacks issued, the condition of the federal treasury, the military successes and reverses of the Union cause, and, in later years, the prospects for the resumption of specie payments. Greenbacks reached a parity with gold two weeks before the resumption of specie payments on January 1, 1879. A fact of special significance is that until July, 1863, the greenbacks were convertible at par into 6 per cent gold bonds. These bonds formed an actual standard of value for the greenbacks, and although themselves depreciated, exercised for the time being a steadying influence upon their price.

As the common medium of exchange consisted almost entirely

of greenbacks [1] and of bank notes convertible only into greenbacks, prices were stated in greenback "dollars" and naturally rose as the gold value of the greenback depreciated. Reference to the table on the next page will show a rough correspondence between changes in the general level of prices, expressed in greenbacks, and changes in the price of gold, also expressed in greenbacks. But the wholesale prices of commodities rose relatively higher than did the price of gold, and declined less rapidly.[2] Retail prices, in turn, declined less rapidly than did wholesale prices. Wages advanced more slowly than prices; maximum wages were not paid until 1872, — seven years after retail prices and eight years after wholesale prices had reached their maximum.

That there was not a closer correspondence between the movement in general prices and the changes in the gold value of the greenback was due to two sets of influences: (1) Even if greenbacks had not been issued, and if prices had been expressed in gold, there would have been marked fluctuations in prices, — not only such as continually occur in normal years, but also those due to such exceptional things as the withdrawal of a large number of men from industry and agriculture to military service, the shifting of productive effort in response to the enormous demand for military supplies, the period of extraordinary business activity, of railway building, and of agricultural and industrial expansion that followed the war, the reaction and financial crisis in 1873, and the return of prosperous conditions in the last years of the greenback period.[3] (2) The depreciation in the gold value of the greenback was recorded quickly and accurately in the gold market, but the movement of prices was hampered by habit, custom, existing contracts, local influences, etc. Retail prices are less sensitive to changing market conditions than are wholesale prices. Wages, in turn, are usually less mobile than retail prices.

[1] Subsidiary coins did not go out of circulation until 1862, when the value of the greenback dropped below the value of the bullion in these coins. Postage stamps and notes and tokens issued by cities and by business firms were for a while used as small change. In 1862 the situation was helped by the issue of fractional paper currency in denominations as low as three cents.

[2] The more detailed figures, of which the table given here is only a summary, show that the prices of commodities also *advanced* more slowly than did the price of gold. For an illuminating discussion of these price changes see Mitchell, *Gold, Prices, and Wages under the Greenback Standard*, Chap. v.

[3] This statement is subject to the limitation implied in the fact that general commercial conditions were themselves caused in part by the influence of the cheap and fluctuating medium of exchange.

TABLE I

PRICES AND WAGES IN THE GREENBACK PERIOD[1]

YEAR	AVERAGE ANNUAL PRICE OF GOLD IN GREENBACKS	JULY WHOLESALE PRICES[2]	AVERAGE ANNUAL PRICES[3]		AVERAGE WAGES[4]
			Wholesale	Retail	
1860	—	100	100	100	100
1861	—	95	94	107	99
1862	113.3	120	109	131	104
1863	145.2	155	148	168	119
1864	203.3	236	225	215	142
1865	157.3	183	224	219	155
1866	140.9	191	203	208	164
1867	138.2	170	177	193	167
1868	139.7	165	180	190	170
1869	133.0	158	172	177	179
1870	114.9	145	156	166	179
1871	111.7	137	144	155	184
1872	112.4	139	138	151	185
1873	113.8	140	143	148	183
1874	111.2	138	144	145	175
1875	114.9	129	134	140	163
1876	111.5	118	120	135	153
1877	104.8	114	117	134	143
1878	100.8	99	99	127	142
1879	100.0	98	93	123	139

All these things interacted. Wages, to give only one example, constitute an important part of the expenses of producing commodities, and the sluggish movement of wages kept the expenses of production from advancing, and later from falling, as rapidly as would otherwise have been the case, and must have had a corresponding effect on the prices charged for commodities.

Aside from these general changes, the minor fluctuations, the short-time variations in prices, were unusually wide and numer-

[1] Compiled from *Gold, Prices, and Wages under the Greenback Standard*, by Wesley C. Mitchell. The figures in the price columns are obtained by counting the price of each commodity in each year as a percentage of its price in 1860, and then averaging the various *relative prices* thus obtained for each year. The figures in the wage column are computed in a similar way. In the "price of gold" column parity between greenbacks and gold is represented by 100.

[2] 92 commodities. [3] 21 commodities. [4] For 78 establishments.

ous, — a fact which may be attributed to the uncertain future of the medium of exchange. Such fluctuations were apt to upset all business calculations; chance became more important and foresight less important as a factor in profits. Under such conditions an intense and reckless spirit of speculation was bred, with unfortunate effects on business morality as well as on economic conditions.

As a fiscal expedient, the greenbacks led to results as disastrous as those which attended their use as money. The government was forced to sell bonds for depreciated greenbacks, but in order to maintain its credit it had to pay the interest and ultimately the principal of these bonds in gold. Supplies for the army were paid for in depreciated greenbacks, but these greenbacks had to be ultimately redeemed in gold. It has been estimated that the use of the greenbacks increased the expense of the Civil War by nearly $600,000,000.[1]

Fiat Money. — After 1873 the advocates of cheap money were not content with merely opposing any reduction in the quantity of the greenbacks. They went so far as to urge that the amount of paper should be greatly increased, and that the use of metallic money should be definitely and permanently abandoned. Bank notes were also attacked because they were issued by "privileged corporations." The question came to be an important political issue, and in 1876 it brought about the organization of the Greenback party, which figured in three presidential campaigns, and which polled more than a million votes in the congressional elections of 1878. In more recent years similar demands were voiced by the Populist party.

The theory of money which formed the basis of the contention of the members of the Greenback party is sometimes called the "fiat money" theory. Those who held this theory of money saw no significance in the fact that the greenbacks were in form promises to pay and that they were generally regarded as only

[1] This estimate applies only to the increased expense *to the government*, and consequently to its taxpayers. The real economic costs of the war were not greatly affected by the use of the greenbacks. Bondholders gained, for example, a large part of what taxpayers lost.

temporarily irredeemable. In their view they were simply "dollars," made such by the expressed will of the government. Nor did they see any significance in the fact that during the seventeen years of the suspension of specie payments over $500,000,000 in United States gold coins issued from the mints. As a matter of fact the fiat money advocates were misled by what some logicians have called the "jingle fallacy." That the "dollar" of the ordinary medium of exchange and the "dollar" as a standard monetary unit were different things did not occur to them.

If they had succeeded in eliminating the credit element in the paper currency by ceasing to print "promises to pay "(as they actually proposed to do), and had instituted a new name for the money unit, — possibly (to reverse the spelling)" rallod," — they would perhaps have encountered difficulty in getting people to use pieces of printed paper, informing them that "*This is a rallod,*" as money. It is hard to see how "the supply of money as compared with the demand for it," on which the fiat money advocates counted to fix the purchasing power of their money units, would have helped matters very much. Nor would the redeemability of fiat money in interest-bearing bonds, which was suggested by some, have given us a monetary standard. For the bonds would have been merely promises to pay certain sums of fiat money, with interest at a certain rate, also in fiat money. The difficulties that would have been encountered in international trade would alone have sufficed to make fiat money impossible.

This should not be taken to mean, however, that irredeemable paper money, issued in familiar denominations, may not under favorable circumstances circulate for some time among people accustomed to its use, even if there is no prospect of its ever being redeemed. The most important of the necessary "favorable circumstances" is the absence of complications in foreign trade, such as have already been discussed in connection with the subject of seigniorage. But, at best, there would be a host of practical difficulties in the way of getting the right amount of money, and only the right amount, into circulation.

QUESTIONS

1. Would wheat make a satisfactory money commodity? iron? platinum? diamonds?

2. Would it be possible to maintain a seigniorage of 10 per cent on United States gold coinage? What would be the effect on the prices of imported commodities? of domestic commodities?

3. Report on the following questions not answered in this chapter: (1) What is the "limit of tolerance"? (2) On whom does the loss from the wear of gold coin fall? (3) To what extent are different kinds of United States money legal tender?

4. If the United States had adopted the free and unlimited coinage of silver in 1896, how would prices have been affected?

5. Is the actual monetary standard pure gold or gold of standard fineness?

6. What elements of truth are there in the statement that "coins get their value from the government stamp"?

7. In the table printed on page 254, why are not gold certificates, silver certificates, and treasury notes of 1890 included in the statement of the aggregate amount of money in the United States?

8. Interpret the statement: "The value of the greenbacks depreciated." Explain in particular the meaning of the words *value* and *depreciated* as thus used.

9. Do you make a loan to the government when you receive greenbacks in payment for goods or services?

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CHAPTER XV

CREDIT AND BANKING

Credit Transactions. — Thus far, in our discussion of money, we have failed to take account of the fact that the greater part of exchanges are credit transactions, which do not directly or immediately involve the use of money (in the sense of generally acceptable money instruments). A credit transaction is a transfer of goods, services, or money for a future equivalent. In a " cash " transaction there are only two elements, — the goods sold and the money paid for them. But in a credit transaction a third element — time — is added. The introduction of this third element leads to exceedingly important results. In the first place it makes possible an enormous number of exchanges in which the buyer is either unable or disinclined to render a present equivalent. In the second place it obviates, to a very large extent, the necessity of using money.

Suppose, for example, that A and B are the only inhabitants of an isolated community. Three ways of making exchanges are open to them. They can use a system of direct exchange or barter, which will prevent A from getting goods from B unless he has some equivalent which he is willing to give up and which B is willing to accept. Or, they may use one commodity as money, in which case the purchasing power of either A or B at any given time will be governed by the amount of that particular commodity he possesses, rather than by the total amount of all his possessions. But by combining a system of credit with their use of money, they will be able to make transfers freely, for in an occasional balancing of accounts most of the payments due each other will cancel, leaving only a relatively small amount to be paid in money.

Something very much like this third process is continually going on in contemporary economic life. The process is more complex, however, because A actually sells things to one person or group of persons, and buys them from other persons. And it is very likely that these two groups, the sellers and the buyers in A's transactions, have no direct business transactions with each other in which their respective claims against A and debts to A can be canceled. If, however, we take all buyers and all sellers into account, and if we could push our analysis of the complex network of credit relations far enough, we would find points of contact between A's credits and his debts. That is, if A gives a promissory note in exchange for a purchased good, this promissory note might be passed on from hand to hand until it got into the possession of someone who is indebted to A, — if the path it should take were known. The difficulty is that the path is not known. The institution of *banking*, however, *provides clearing centers, where credits and debts are balanced against each other and canceled.*

A, for example, has a " deposit " in a local bank, which means that he has the right to demand money from it at any time up to the amount of his deposit. He usually makes a payment to B, not by money or by a promissory note, but by a check, — an instrument ordering the bank to pay B the specified amount. This check will be presented for payment by B at a bank where he has a deposit, but the "payment" will usually be made by adding the amount of the check to B's deposit. If it is the bank where A also has his deposit, the transaction is settled by the simple process of debiting A's deposit and crediting B's. If it is another bank in the same town, and if the town is a small one, the check will enter into the daily exchange by the two banks of such claims against each other, the daily balance in favor of either bank being usually settled in money.

In the larger cities a further economy in the use of money is achieved by means of the *clearing house*, to which a representative of each bank brings daily all of the checks drawn against other local banks which it has received since the last " clearing." At the clearing house the checks are turned over to the repre-

sentatives of the banks against which they are drawn, but balances are not settled between the individual banks. Instead, a balance is struck between the total sum of each bank's claims against other banks and the total claims of other banks against it. Each bank then pays to the clearing house, usually in money, or receives from it, as the case may be, the amount of balance due to it or from it. This system achieves a great economy of both time and money.[1]

If the banks in which A and B keep their deposits are in different towns, A's check will probably be sent by B's bank to a bank in a neighboring large city, in which B's bank has its own deposit account. If A's bank is also in the territory tributary to this same city, the check may be sent by the city bank directly to A's bank for collection, or to its own correspondent bank in the same town. If A's bank is in another part of the country, the check will be sent to a bank located in a large city in that region, which will attend to its collection.[2] Thus a check drawn on a local bank in California, deposited in a local bank in Illinois, will very likely be collected *via* Chicago and San Francisco. The balances of credits and debits which are thus created between city and country banks are settled to a very large extent by means of crediting and debiting deposit accounts in city banks, thus obviating by that much the necessity for frequent shipments

[1] Over $90,840,000,000 in checks and drafts passed through the New York Clearing House in the year ending September 30, 1915. The money balances paid amounted to $5,340,000,000, or less than 6 per cent of the total clearings. The average cash payments required during the last sixty-two years have amounted to less than 5 per cent of the clearings. In times of financial stringency clearing houses sometimes permit payment of balances in "clearing house loan certificates," issued to individual banks upon the basis of approved securities deposited with the clearing house. In some cases the banks have temporarily put such certificates into general circulation as emergency currency.

[2] The London Clearing House clears for all England in a very simple and efficient way. A country bank sends its daily receipts of checks on banks in other towns to the London bank in which it keeps a deposit. In a daily "country clearing" these checks are distributed to the London banks where the banks on which the checks are drawn keep accounts. The mere territorial extent of the United States makes such a scheme unworkable here. The federal reserve banks, however, hope to develop a system of regional and inter-regional clearings for their member banks.

of money. In general, we have in the United States a continuous balancing and cancellation of debts and credits, first, in each locality; second, between each important city and its tributary territory, and, third, between the different important cities. Much the same process is characteristic of international exchange, but that is a topic which will be treated in another chapter.

Personal Credit. — If a man does not hoard money on the one hand, or fail to pay his debts on the other hand, his expenditures (including investments) are bound to be, in the long run, approximately equal to his income. But for a business man a *continuous* equality of income and expenditure is impossible. At some times his deposit account will be built up more rapidly than he checks it out; at other times his need for means of making payments will outrun his receipts. If, for example, he is a contractor, whose expenses of production are fairly constant, but whose product is paid for only when completed, or a merchant, who replenishes his stock of goods twice a year but whose sales are distributed throughout the year, or a farmer who must pay his harvest expenses before he sells his crops, he may find it necessary to utilize his *credit.* This he does by giving to others *rights to demand money from him in the future.* Now, the extent to which he can utilize his personal credit, his power of purchasing things without immediate money payment, will depend to some extent on his personal ability and integrity. But, nevertheless, the fundamental measure of his credit will be the amount of his realizable wealth. This, however, may consist in part of property that is not "for sale," — his stock of consumption goods and his income-yielding land or capital, and in part of things that he hopes to sell in the normal course of business.

These things do not have to be sacrificed immediately in order to acquire the present means of payment. To meet a temporary need they may be made the basis of credit, through the process of *hypothecation*, a name which means the conditional transfer of property rights. The hypothecation may be definite and formal, as when a mortgage is given on specific items of property or when valuable credit instruments of various sorts (such as government or corporation bonds, bills of lading, warehouse

receipts, etc.) are put into the actual possession of the creditor as "collateral security"; or it may be simply implied, as in the case of an "unsecured" personal note, for practically all of the property of a borrower, over and above the items specifically hypothecated for certain debts is, in legal fact, hypothecated for his remaining debts. It is important to note, too, that future values, rather than present values, constitute the basis of present credit. The lender's interest is in the question of the adequacy of the money value of the security at the time when payment becomes due. Present prices being equal, a borrower can secure a larger amount of credit when market conditions are improving than when they are declining.

A man's probable future income and the probable future money value of his property, then, constitute the real measure and foundation of his personal credit. His personal credit, however, is of limited use to him as a means of payment. Some difficulties in the way of using personal notes as media of exchange have already been suggested.[1] There is another difficulty in the fact that his personal notes will not be willingly accepted by others in lieu of money payments unless they know him, the value of his property, and the extent to which it is already hypothecated. Moreover, these same difficulties stand in the way of such notes being passed from hand to hand, even with successive indorsements.

Bank Credit. — In order to acquire a readily available medium of exchange, personal credit has to be exchanged for bank credit.

[1] It is true, of course, that business men often accept their customers' notes in payment of accounts, or as an equivalent for goods purchased. These notes, however, do not usually pass any farther as a medium of exchange, but are indorsed by the business man and presented to a bank for discount. Such notes, often known as "trade paper," constitute a large part of the securities of many commercial banks. In recent years, however, an increasing proportion of bank loans have been made upon "one-name paper." Buyers find it advantageous to secure the discounts for cash payments usually given by manufacturers, wholesalers, and jobbers, obtaining the necessary funds by borrowing from the banks on their own notes. The federal reserve banks are attempting to increase the use of paper bearing the names of both buyer and seller, and in particular to develop a larger use of bills of exchange (drafts) in place of promissory notes. The purpose is to make it easier to distinguish those borrowings which arise from "actual commercial transactions."

Instead of using his own note as a medium of exchange, a business man will normally have it " discounted " by his banker. If the note is for sixty days, for example, the business man yields *the right to demand a specific amount of money from him in sixty days*, in exchange for a deposit credit, — *the right to receive on demand the same amount of money less the discount.*[1] The business man adds the note to his liabilities and the deposit to his assets. The bank adds the note to its assets and the deposit to its liabilities.

Having exchanged his personal credit for a bank deposit, the business man can now use the latter as a means of payment through the checking system that has been described. Ordinary commercial banking consists, in large part, of this purchase of personal credit and sale of banking credit. The bank builds up assets in the form of loans and discounts at the same time that it builds up its obligations in the form of deposits.

The security behind the deposit liabilities of any bank consists of: (1) loans and discounts, which in turn rest back upon personal credit or upon specifically hypothecated property (as in the case of loans on collateral security); (2) bonds, mortgages, and other securities owned by the bank, which, if necessary, may be sold for the benefit of the depositors, unless specifically pledged as security for bank note issues; (3) the bank's own deposits in other banks, together with the checks or similar claims against other banks that are in its possession; (4) its other property (building, fixtures, etc.); (5) (in national banks and some state banks) the personal liability of the bank's stockholders;[2] (6) its stock of money.

[1] Discount is simply one form of interest. Banker's discount differs from ordinary interest in that it is computed as a certain per cent of the total amount that is repaid, while ordinary interest is computed as a per cent of the amount that is lent. Discount is deducted from the principal of the loan in advance; interest is paid at the maturity of the loan or (on long time loans) at stated intervals. On demand or "call" loans and on time loans on collateral security "interest" rather than "discount" is charged.

[2] Even in case some of the bank's loans or securities prove worthless there is a margin of safety for the depositors in the fact that some of the assets of the bank represent the original investments of the bank's stockholders ("*capital*") or profits which they have put back into the business ("*surplus*"), and on such assets the depositors have the first claim. Moreover, in national banks and some state banks

But that these assets should suffice to cover the deposit liabilities of a bank is not in itself sufficient to maintain its solvency. Much depends upon the character of the assets, — the amount of money included in them, and the ease and quickness with which other parts of the assets can be converted into money. Each deposit account is an obligation of the bank to pay in actual money if it is demanded. The depositor cannot use checks for all kinds of payments, but will often have to draw on his deposit account for money. Even when payments are made by checks, those who receive them will often prefer to cash them rather than to deposit them. Moreover, the process of the cancellation of credit obligations is, as we have seen, not altogether perfect. Balances arise between individual banks in the same city, between city and country, between different cities, and between different nations that very often have to be settled in money.

STATEMENT OF THE CONDITION OF A NATIONAL BANK IN A SMALL TOWN

RESOURCES		LIABILITIES	
Building and fixtures	$45,000	Capital stock	$50,000
Government bonds	50,000	Surplus	25,000
Other securities	30,000	Notes outstanding	48,000
Loans and discounts	460,000	Deposits	531,000
Due from other banks	42,000	Due to other banks	3,000
Cash	35,000	Undivided profits	5,000
Total resources	$662,000	Total liabilities	$662,000

A bank accordingly has to keep enough actual cash on hand to enable it to meet any demands that may be made upon it for money. As deposits constitute the most important cash obligations of most banks, the size of this money *reserve*, as it is called, is normally fixed for safety's sake at a certain per cent of the amount of the deposits. This proportion varies according to

the stockholders are in addition personally liable up to an amount equal to the par value of their holdings.

the location of a bank and the nature of its business. In practice it varies in different commercial banks from as low as 5 per cent to as high as 35 per cent of the deposits.

If its reserve increases, a bank is at liberty to increase its deposits by extending its loans and discounts, attracting these, possibly, by lowering the discount rate. If the reserve is decreasing, the bank must, for safety, contract its deposits by restricting its loans and discounts, or by taking measures (such as the sale of securities for money) that will replenish the reserve.[1] In order that the ratio of reserve to deposits may be maintained near the point where the right balance is struck between profitableness on the one hand and safety on the other hand, it is necessary that the bank's assets should be as *fluid* as possible. This is best accomplished by confining most of the loans or discounts to notes or bills of exchange that are payable in thirty, sixty, or ninety days, or, at most, in four or six months, so that a constant flow of maturing obligations makes it possible for a bank to expand or contract its loans and discounts, and hence its deposits, as seems most advisable.

There has been in the larger cities of the United States, especially in New York, a growing use of bank loans payable on demand. This enables the banks to keep their outstanding loans much closer to the maximum allowed by the state of their reserves than would otherwise be the case, but the practice has, as we shall see presently, other effects that are not so desirable.

By the "money market" is usually meant the market for freely exchangeable rights to receive money on demand; that is, in reality, the bank credit market. The amount of bank credit available, the freedom with which banks will make loans on certain kinds of securities, and the interest and discount rates charged for bank credit are among the things that make up what is called "the state of the money market." But it should be clear to the reader that *the state of the money market depends*,

[1] Some banks maintain a "bond reserve" of high grade securities that may be sold to enable the bank to meet an extraordinary demand for money or to enable it to extend its loans and discounts when necessary. Such investments are normally made by commercial banks when the demand for loans does not absorb the funds at the bank's disposal, that is, when money reserves are unprofitably large.

primarily, on two things: first, the amount and nature of the personal credit that can be exchanged for bank credit, and second, the amount of money in the bank reserves.

Bank Notes. — There is one way, however, in which banks can meet some of the demand for money without drawing on their reserves and thus reducing their power of extending credit. This is by the issue of bank notes, which are simply the promises of banks to pay money on demand, issued in convenient and familiar form for use as paper money. These notes are paid as money to customers of a bank who want the proceeds of their borrowings in cash, and to depositors and to holders of checks who prefer money to deposit credit. Bank notes pass readily from hand to hand as money, and at the present time constitute an important part of the circulating medium in most countries.

Bank notes are like deposits in that both are demand liabilities of banks. Bank notes, however, circulate among persons who have no means of informing themselves as to the solvency of the banks issuing them. The holders of bank notes are accordingly usually given special protection by laws which regulate the conditions of their issue and redemption.

State Banks of Issue. — Before the Civil War the actual circulating medium of the United States consisted in very large part of notes issued by banks operating under state laws. The notes issued by some of these banks were as " good as gold " because the banks redeemed them promptly in gold, — a fact which was due in some cases to wise and rigid state regulation of banking, and in other cases, fewer in number, to conservative use of the too extensive privileges granted by lax state laws. But the notes of other banks were depreciated and in many cases were absolutely worthless.

Public ignorance of the real nature of banking gave rise to the supposition that wealth could be mysteriously manufactured by means of a bank charter and a printing press (the fiat money theory applied to bank notes). This and the ever recurring demand for cheap money were responsible for the situation. Prohibited by the Constitution from issuing their own bills of credit, many of the states, especially in the South and West, responded

to the clamor for cheap money by making it possible for their citizens to organize " banks " and issue their own bills of credit, imposing few or no requirements as to the actual investment of capital, the accumulation of assets, or the restriction of note issue.[1] In the panics of 1814, 1837, and 1857 but few banks maintained specie payments. Even so late as 1860, although the hard lessons of experience had brought some improvements, especially in the older states, the bank note circulation was of decidedly varying quality. " Bank note reporters " and " counterfeit detectors " had to be issued periodically in order to give to business men the latest quotations and information relating to the depreciated currency they had to receive in the ordinary course of business. After 1861 the suspension of specie payments led to a general depreciation of bank notes as compared with gold, because most of them were thereafter redeemable only in greenbacks.

The National Banking System. — The successful state banking system of New York was the model after which Congress, following the recommendations of Secretary Chase, patterned the national banking system which it established in 1863. The primary, although not the only, motive that led to this action was the desire to provide an artificial market for government bonds, which at the time were a drug on the market. National banks were required to use government bonds as the assets behind note issues, and furthermore, the national banks were, in 1866, given a monopoly of the note issue privilege by the imposition of a prohibitive tax of 10 per cent per annum upon the note issues of state banks.

The details of the national banking law have been amended from time to time, but the general principles of the regulation of the note issue remained unchanged until Congress passed the Aldrich Act in 1908. As the law has stood since 1900, national banks may not be organized unless the stockholders contribute a minimum capital, varying from $25,000 for places of less than

[1] Some states circumvented the constitutional prohibition mentioned by establishing their own banks for the manufacture of paper money. The Bank of Kentucky was the most famous of these.

3000 population to $200,000 for places of more than 50,000 population. Three limitations are put on the ordinary issue of circulating notes: (1) They must not exceed in amount the capital stock of the bank. (2) United States government bonds have to be purchased by the bank in amount sufficient to equal, dollar for dollar, the quantity of the notes issued, and these bonds have to be deposited with the treasurer of the United States as security for the redemption of the notes. (3) Each bank must maintain in the United States treasury a redemption fund in "lawful money" equal to 5 per cent of its note issue. As this last requirement indicates, bank notes are redeemable at the federal treasury. They may also be used in all payments to the government except customs duties, although they are not legal tender.

The Reserve System. — While the note holder is thus protected by a special kind of security set aside for the purpose, the depositor in a national bank is protected only by its general assets. These, however, are regulated to some extent by the federal government. There are restrictions, for example, intended to prevent the bank from tying up its funds in long-time investments, from lending too much to one person or firm, or to directors or officers of the banks. Five times a year national banks have to furnish full statements of their condition to the comptroller of the currency at Washington. Each bank is also examined twice a year, without notice, by federal bank examiners.

But the most important requirement relates to the money reserves that must be held by national banks. Until the Federal Reserve Act was passed in 1913, banks in "central reserve cities" (New York, Chicago, and St. Louis) were required to maintain a "lawful money reserve" [1] equal to at least 25 per cent of their deposits. Banks in other "reserve cities" (including at present about fifty cities) were also required to maintain 25 per cent reserves, but their deposits in the national banks of the central reserve cities might be counted for one half of this amount. In all other places the banks were required to hold a 15 per cent reserve, three fifths of which might consist of deposit accounts in banks in central reserve cities or other reserve

[1] Including all kinds of United States money except minor coins and bank notes.

cities. In all cases the funds kept by the banks with the United States treasurer for the redemption of their notes were counted as part of their legal reserves.

The New York Money Market. — Under the operations of this system the cash reserves of the national banks were centered in New York. This appears clearly in Table I, which shows that on the date specified (which may be taken as fairly representative of conditions in recent years) more than a third of the cash reserves of the 6544 national banks in the United States were in

TABLE I

DEPOSITS AND RESERVES OF NATIONAL BANKS: AUGUST 22, 1907[1]

LOCATION	NO. OF BANKS	DEPOSITS[2]	RESERVE		CLASSIFICATION OF RESERVE		
			Amount[2]	Rations[3]	Lawful money in bank[2]	Due from reserve agents[2]	Redemption fund[2]
New York . . .	38	825.7	221.3	26.8	218.8	—	2.6
Chicago	14	262.9	66.6	25.3	66.1	—	0.5
St. Louis	8	116.8	27.6	23.6	26.8	—	0.7
Other reserve cities	306	1423.4	362.3	25.5	190.3	165.7	6.3
Country banks . .	6178	2627.2	443.5	16.9	199.6	226.7	17.2
Total	6544	5256.1	1121.4	21.3	701.6	392.4	27.3

the vaults of thirty-eight New York banks.[4] These figures do not, however, convey an adequate idea of the national importance of the New York bank reserves. New York is the great wholesale market for foreign exchange, the chief center of gold movements to and from Europe, the principal importing and exporting center for commodities, — in short, the chief market place of the continent and the focus of financial operations. All state banks, private banks, and trust companies of importance find it to their advantage to maintain deposit accounts in New

[1] Compiled from Report of the Comptroller of the Currency, 1907, pp. 222–224.
[2] Millions of dollars. [3] Per cent.
[4] The bulk of the deposits of out of town banks was in from twelve to twenty banks which have made a specialty of this kind of business.

York, both for their own use, and in order that they may supply New York exchange to their customers. Even the deposit accounts of national banks in New York were in the aggregate considerably larger than the amount they were allowed to count as part of their reserves.

All together the deposits of other banks have usually constituted more than half of the aggregate deposits in New York national banks. Moreover, something very much like this reserve system existed (and still exists) among other than national banks, the banks in smaller places keeping deposits in national or other banks in larger cities, which in turn keep deposits in New York. The trust companies, and some of the state banks,[1] keep in general very much smaller reserves in their own vaults than are required of national banks, — a fact which made the strain on the New York bank reserves all the greater.

Like an inverted pyramid upon its apex, the great structure of bank credit in the United States has rested, in large measure, upon the money reserves of the New York banks. Every important change in the demand for money or credit in any part of the country has had an effect on the New York money market; similarly, every important disturbance in the New York money market has affected financial conditions throughout the country.

The central reserve system effects a great economy in the use of money, and, what is more important, it mobilizes the cash resources of the country in such a way that variations in the local supply of bank credit in different regions resulting from differences in the local supply of money available for bank reserves are minimized. It seems to be a natural and necessary feature of modern banking, for something like it is found in all the leading commercial nations. But in the United States the central reserve system has worked badly. This has been attributable in part to other defects in our national banking laws and in part to some unfortunate features of the reserve system itself. Specifically, the principal sources of difficulty have been the following:

[1] Savings banks keep reserves that average for the United States only four fifths of one per cent of their deposits. On account of the nature of their business, which is not banking in the commercial sense, they are a negligible factor in this connection.

(1) the dominance of speculative influences in the New York money market; (2) the independent treasury system; (3) the lack of elasticity in our bank note issues; (4) the rigidity of our legal reserve requirements; (5) the absence of any one central authority, responsible for the custody and maintenance of the central reserves. We now proceed to the discussion of these matters.

Speculation and the New York Money Market. — As Table II shows, a large proportion of the loans of New York banks have not been based on "commercial paper"; that is, on the notes and bills of exchange that arise in the ordinary course of business, but have been either time loans on collateral security or demand loans, nearly all of which are secured by collateral. Most of these collateral securities are the stocks and bonds of corpora-

TABLE II

Loans and Discounts of New York National Banks on Specified Dates[1]

(In millions of dollars)

Character of Loan	1890	1901	1906	1912
On demand	102	279	303	344
On time, with collateral security	43	129	149	223
On time, without collateral security	152	203	249	391

tions, and the loans, especially the demand or "call" loans, are used for the greater part in financing speculation in such securities. This system has been partly responsible for the excessive and useless expansion of speculation over and above the amount that is necessary to secure the best results for the economic interests of the country. Here we are concerned, however, with its effects on the money market.

The supply of call loans depends primarily on the amount of the *surplus reserves* of New York banks; that is, the excess of the reserves over and above the legal minimum percentage of

[1] Compiled from Reports of the Comptroller of the Currency.

the amount of their deposits. If the weekly statement of the clearing house banks shows a relatively large surplus reserve, this means that the banks can safely expand their loans, and the knowledge of this fact has a stimulating effect on speculation. If, however, the surplus reserve is low, the banks are bound to restrict their loans of all kinds and to " call " some of their demand loans. When the reserve is below the legal limit, demand loans have to be called in large quantities in order to enable the banks to meet pressing demands for credit on the part of their regular customers. The precipitate calling of demand loans by some banks simply increases the demand for credit at other banks, which in turn have to curtail their loans. Such a condition of the money market leads to a depression in the price of speculative securities, which is increased by the forced sales of securities in order to obtain the money funds that had previously been lent on them; the fall in the prices of securities leads brokers to demand more " margins " from the customers for whom they have bought securities, and it leads the banks to demand more securities as collateral for their outstanding loans. Under such conditions the interest rate on call loans has sometimes gone as high as 125 per cent, or even higher.[1]

If the ruling prices of speculative securities have been higher than industrial conditions would warrant, such a disturbance of the money market is apt to be long continued, and might easily develop into a general financial crisis. The call loan market is essentially speculative, and it is unfortunate that the condition of the supply of credit for the normal commercial needs of the country should have been periodically unsettled on account of this fact. In no other great money center of the world

[1] That is, the rate on what may be called *marginal* call loans, effected at the stock exchange by bankers' agents, or by individuals or corporations. Many banks continue to make call loans to their regular customers at such times at rates not exceeding 6 per cent. Under normal conditions the rate on call loans is lower than the rate on time loans. For the period 1901–1906 the bank rate on call loans averaged 3.3 per cent as against an average rate of about 4.5. per cent on time loans. Excessive variability is the chief characteristic of the call loan rate. *Cf.* W. A. Scott, "Rates on the New York Money Market," *Journal of Political Economy*, vol. xvi, pp. 273–298.

do call loans occupy the important place that they do in New York.

The Independent Treasury System. — The United States government has for many years been to a very large extent its own banker. It has kept its own money in its own strong boxes, quite after the fashion of a medieval monarch. The strong boxes in this case have been, however, the vaults of the treasury in Washington and of nine subtreasuries located in important cities. Apart from the fact that the government revenue and the government expenditures are naturally not distributed evenly throughout the year, the government has the further difficulty that a close balance of revenues and expenditures for any given year must be wholly accidental. Even if the federal budget were carefully and scientifically constructed, as it is not, the public revenues would be liable to uncertain fluctuations, — a result in part of the importance of customs receipts among them. The government, furthermore, receives a large part of its income in money, not in bank credit instruments. When a surplus accumulates in the government treasury, that much money is taken out of circulation. This reduces bank reserves, and contracts the amount of bank credit available. And it usually happens that the government revenues are largest when business is most prosperous, and when, consequently, maximum bank reserves are needed.

The government is permitted, however, by the national bank act of 1863 to deposit money in selected national banks. Some secretaries of the treasury have made little use of this privilege, but in recent years such deposits have become more common.

Until 1902 banks had always been required to deposit government bonds with the federal treasury as security for federal deposits, but in that year and again in 1906 Secretary Shaw offered to accept approved state and municipal bonds in lieu of a certain amount of government bonds, on condition that the latter should be immediately used as security for increased note issues. Subsequently the banks have also been permitted to use "prime commercial paper," endorsed by the banks, as collateral. In 1897 only 168 banks were government depositories. In 1914 there were 1584, which held on June 30 of that year about half of the $170,000,000 constituting the government's cash surplus at that date. Part of this increase is

attributable to the effect of a law enacted in 1907 allowing customs receipts to be deposited in banks. Prior to this deposits could only be made from the proceeds of internal revenue duties and miscellaneous receipts. In recent years the banks have been required to pay 2 per cent interest on government deposits.

The government has, on several occasions, come to the rescue of the banks by cash purchases of its own bonds. The decline in the market price of government bonds in periods of financial stringency makes the purchases relatively advantageous to the government. The periodic shifting of government deposits to localities where money is most needed, the temporary deposit of gold in New York banks equal in amount to their engagements of gold for transportation from Europe, and even the arbitrary withdrawal of government money from the banks when it was "not needed," in order that it might not be made the basis of speculative activities but kept until it "was needed," have been notable features of the recent relations of the treasury and the money market.

In favor of this system it may be said that a surplus in the government treasury constitutes a real cash reserve, the wise use of which by the Secretary of the Treasury might avert a serious crisis. But there are dangers in intrusting so much financial power to one man. If used without discretion it is bound to do more harm than good. Moreover, these treasury operations have not always been free from the suspicion of favoritism to certain banks. Then, too, the knowledge that the government surplus will, in time of necessity, be put at their disposal tends to encourage unsound banking by relieving the banks of the proper responsibility for the maintenance of their own reserves.

Finally, it should be noted, the use of the independent treasury system has prevented the government from securing for itself any large measure of the various economies and advantages that business firms find in keeping bank accounts.

The Movement of Money. — The demand for loanable funds (rights to receive money on demand) varies locally, according to the business conditions that exist in different parts of the country. These differences make loans worth more in some localities than in others, and result in some shifting of bank credit. New York banks, for example, sometimes invest in "out of town" commercial paper when this is more profitable than employing their funds at home. More frequently, interior banks place loans in New York, either through their correspondent banks there, or by the purchase of securities from note brokers. This *shifting of credit,* however, is unimportant as

compared with the *movement of money* itself. Money is continually flowing from New York to the interior and from the interior to New York, according as it can be more profitably employed in bank reserves in one place or the other. Similar movements take place between the various cities of the country. This movement, it will be noted, is not one that is apt to disturb financial conditions. On the contrary, it tends to prevent extreme local fluctuations in money market conditions by leading to the expansion of credit where it is most needed, and similarly, to the contraction of credit where it is least needed.

There is another kind of money movement, however, which is not so fortunate in its effects upon the money market. This is the movement of money out of bank reserves into general circulation and out of general circulation into bank reserves. The amount of money needed as an actual hand-to-hand medium of exchange varies for different seasons and for different localities. The demand for money to serve as the basis of credit in bank reserves and the demand for money as an actual medium of exchange are different and competing demands. When more money is needed as a medium of exchange, reserves have to yield and credit has to be contracted.

The most important movement of this sort is in response to the annual demand for money to be used in "moving the crops." Harvest expenses are very largely wages, and these have to be paid in cash. Many farmers, moreover, insist on receiving money payments when they sell their crops. The cotton crop of the South and the grain crop of the West annually necessitate the conversion of bank deposits in those regions into money, and the negotiation of loans on the security of the crops, the proceeds of which are also largely taken in cash. The banks in these sections of the country in turn secure money from the banks in which they have deposits, and in large part this money is obtained directly and indirectly from the New York bank reserves. The movement of money from New York to the South and West usually commences in August of each year and continues through November, when the return movement sets in, continuing usually till February. Despite the fact that the New York bankers

are forewarned of this movement, it always reduces their surplus reserves and leads to stringent and sometimes precarious conditions in the New York money market, — conditions which are frequently reflected in difficulties in the money market throughout the country.

To the arbitrary flow of money to and from the treasury, and to its movement to and from bank reserves and hand-to-hand circulation, there must be added the movement of gold between this and other countries. This will be discussed in another place; it is sufficient to note at this point that this external money movement is at the same time a cause and an effect of changing money market conditions.

Inelastic Currency. — That these money movements have affected the supply of bank credit as they have is partly attributable to the *inelastic* character of our bond-secured bank currency. Under the provisions of the national banking law that have been described, the variations in the amount of bank notes outstanding have borne a close relation to variations in the price of government bonds, — and these variations are affected by many other things than money market conditions, and in recent years have been very small.

As will be seen in Table III, the creation of the two per cent bonds, payable in 1930, stimulated the issue of bank notes, because the federal tax is only one fourth of one per cent semi-annually on bank notes secured by two per cent bonds as against one half of one per cent on notes secured by bonds paying a higher rate of interest. The relative stability of the amount issued in recent years has been noticeable, what increase there was being a natural result of the increasing number and size of banks. Nor has the amount of note issue responded in any marked degree to the regular seasonal demands for money to move the crops or to the less regular operations of the treasury department or of the foreign exchanges.

Students of banking problems have for many years thought that the national banks should have been permitted to issue part, if not all, of their notes on the security of their general assets, thus placing them on the same basis as deposits. It is

TABLE III

AMOUNTS OF BANK NOTE CIRCULATION SECURED BY SPECIFIED CLASSES OF BONDS: 1900–1915[1]

SECURITY	MARCH 13, 1900	OCT. 31, 1903	OCT. 31, 1915
Loan 1908, 3's	$56,164,820	$1,797,580	$20,377,720
Loan 1907, 4's	130,302,250	2,797,200	—
Loan 1925, 4's	14,697,850	1,410,100	32,304,800
Loan 1904, 5's	21,996,350	718,650	—
Loan 1891, 2's	20,490,150	—	—
Consols 1930, 2's	—	376,003,300	600,678,600
Panama Canal, 2's	—	—	81,614,420
Total	$243,651,420	$382,726,830	$734,975,540

clear that if this had been done any sudden increase in the demand for money as a circulating medium might have been met by exchanging bank credit in the form of bank notes for personal credit, or by the shifting of bank credit from the form of deposits to the form of note issues. "Asset banking," as this is called, is used in Canada, and enables the banks there to furnish money for crop moving purposes without endangering their reserves. Most of the great national banks of continental Europe also issue notes on the security of their general assets. Under such a system, it is clear, the supply of bank notes can expand automatically with an increase in the supply of personal credit in the form of discountable notes and bills of exchange, in just the way that bank deposits expand. To achieve real elasticity, however, it is necessary to provide for the ready contraction of note issues when the special demand for money is over as well as to provide for their ready expansion in time of need.

Inelastic Reserves. — Under our national banking law, banks have to stop lending when their reserves fall below the legal minimum. The central reserves in New York have accordingly

[1] From Reports of the Comptroller of the Currency, *Finance Reports*, 1907, p. 390; 1915, p. 571.

been real reserves only in the sense that they have made it possible for the banks to meet extraordinary demands for ready cash. So far as the extension of credit is concerned they have constituted, not a reserve, but a dead line.[1]

This has often had serious consequences. It is a well-tested principle of sound banking practice that about the worst thing that can happen when bank reserves are low is for the banks to stop lending. Business men, otherwise solvent, are not able to secure bank credit, and so cannot meet their own obligations or exchange their claims against their debtors for bank credit. Forced sales result; the prices of securities and other forms of property fall; the banks "call" their demand loans or ask for larger deposits of collateral securities; more sales are forced, and the pressure on the banks for loans increases. In short, a general money market panic may come from suddenly curtailing loans at a time when bank reserves are relatively low. The wiser banking policy is to lend freely on good security, but at increased interest rates, thus automatically restricting loans to the more necessitous borrowers.

The Bank of England, for example, permits its reserves to fluctuate between very wide limits, and often protects them against possible depletion by reason of withdrawals of gold to other countries by the simple process of raising its discount rate. Since the official Bank of England rate governs the general "open market rate" at which London banks discount commercial paper,[2] the effect is not only that the amount of domestic borrowing is decreased, but also that the quantity of foreign bills of exchange (normally bought in large quantities by London banks) sent to London for discount is decreased. Then,

[1] In practice the law has not been rigidly enforced, a warning from the Comptroller of the Currency being generally the only penalty exacted for a small temporary deficit in the reserves. Nevertheless, the New York bank reserves have not often fallen more than one or two points below the legal minimum.

[2] Sometimes, in order to make its increased rate "effective" in the London money market, the Bank borrows money or sells securities so as to decrease the available supply of loanable funds in the market, thus compelling the other London banks to increase their discount rate. Another device often used by the Bank in protecting its reserves is that of slightly increasing the price at which it buys gold.

as the foreign bills already held in London mature into rights to demand money from other money markets, these offset claims of other money markets against London which would otherwise have to be paid by shipping gold.

Absence of Centralized Control. — It may have occurred to the reader that some elasticity might have been given to bank reserves in the United States if the banks holding the central reserves had made it their practice normally to hold reserves considerably larger than the minimum required by law, — reserves equal to 40 or 50 per cent of their deposits, for example. This would have given a margin sufficient to enable them to meet withdrawals of gold for domestic use or for export without suddenly contracting the supply of loanable funds. All this is undoubtedly true, but it must not be supposed that such a policy could voluntarily have been followed by the New York banks. The difficulty was that the banks holding the central reserves were merely large commercial banks, interested primarily in securing maximum profits for their own stockholders, and with no one of them *individually* responsible for the maintenance of adequate surplus reserves. For any one bank to have attempted to remedy the situation would have helped but little. It would only have put itself at a disadvantage as compared with its competitors. And then there were other factors in the situation that helped to keep the reserves pared down to a minimum. It is not economical for country banks to hold a much larger amount of actual money on hand than they need to comply with the law. Moreover, the New York banks, competing with one another for the deposits of other banks, pay 2 per cent interest on such deposits. In recent years about half of the aggregate amount of lawful money in the possession of the national banks of the country has been in the vaults of New York banks. What surplus reserves were created from time to time by importations of gold, by the transfer of money from the subtreasuries, by the reduction in the amount of money in hand-to-hand circulation, or by a contraction in the total volume of bank deposits, speedily found their way to the New York banks. And the New York banks speedily found ways of

utilizing the additional lending-power created by these surplus reserves. Stock exchange speculation, in particular, could generally be depended upon to absorb in the form of call loans a large part of the increased amount of available bank credit. In short, the operation of the system was such as continually to keep the ratio of reserves to deposits as close to the legal minimum as possible. Any "slack" that might appear was quickly taken up.

These rigid and inelastic reserves were undoubtedly the worst features of our banking system. With more elastic reserves the evils of the independent treasury system and of inelastic currency would not have been so great. Money could have flowed into reserves and out of them without often bringing consequences more serious than fluctuations in discount rates.

Steps toward Reform. — The national banking system has in some particulars been highly successful. National bank notes have always been thoroughly sound, and depositors, too, have been well protected, for failures of national banks have been relatively few. The high standards which the national banking system has set have had a marked influence upon the betterment of state banking laws and upon their enforcement. But the defects which have just been discussed made it both inadequate and, in its larger aspects, unsafe. Students of banking problems had for many years urged the need of reform. Some advocated the establishment of a *central bank*, of the type that is found in almost every country of Europe. These banks hold the central banking reserves of their respective countries, hold the government deposits, have (usually) a monopoly of bank note issue, and are subject to a special measure of government control. But ever since the days of the Second Bank of the United States the establishment of a central bank in this country has probably been politically impossible.[1]

[1] The United States Bank (1791–1811) and the Second Bank of the United States (1816–1836) were large institutions, with numerous branches. But although they issued notes and held the treasury funds, they were not "central banks" in the modern sense. They did not have a monopoly of note issue, for state banks also issued notes, nor did they hold central banking reserves. In each case Congress refused to recharter the bank at the expiration of its original twenty-year charter.

More interest has been aroused, however, in the matter of elastic currency, and various plans for permitting national banks to issue notes secured only by their general assets have from time to time been embodied in bills introduced in Congress. But Congress, the business men of the country, and, it must be said, the bankers themselves, were for the most part apathetic.

General interest in the matter was finally aroused by the panic of 1907, in which the worst features of our banking system stood out in clear relief. Banks throughout the country found themselves unable to meet the large and increasing withdrawals of money by their depositors and were unable in turn to get money from the banks in New York and the other central reserve cities in which they themselves had deposits. The payment of money to depositors had to be suspended or restricted, and many banks with perfectly sound assets found themselves, for the time being, technically insolvent. Money was at a premium. Clearing-house loan certificates — virtually joint obligations of the banks associated in the clearing house, issued to individual member banks upon the deposit of adequate security — were used (as in former panics) in the payment of clearing-house balances. In many cities the clearing-house loan certificates were issued in small denominations and got into general circulation by being paid to depositors in lieu of money. Cashier's checks and other credit instruments were also used as money. The total amount of improvised currency issued during the panic is estimated to have been over $500,000,000.[1] The whole situation was such as to impress upon thoughtful men the imperative need of banking reform.

The first tangible result was the so-called Aldrich-Vreeland Act of 1908, which made temporary provision for such emer-

In each case, also, this occurred when the country was temporarily under the dominance of a strong democratic sentiment opposed to political or financial centralization in any form. Jealousy on the part of state banks was, however, the immediate cause of the demise of the first United States Bank, while the second succumbed to the yet more potent hostility of Andrew Jackson.

[1] A. P. Andrew, "Substitutes for Cash in the Panic of 1907," *Quarterly Journal of Economics*, Vol. xxii, p. 515. For an excellent account of the general situation at the time see O. M. W. Sprague, *History of Crises under the National Banking System*, Chap. v.

gencies as that of 1907 by permitting national banks to issue notes, under a heavy tax, upon other security than government bonds. The methods utilized were, in part, those which had been developed by the banks themselves in issuing clearing-house certificates.

Under this measure banks might increase their note issues in one or both of two ways. First, on the security of approved state, county, or municipal bonds deposited with the Treasurer at Washington. Second, on the security of bonds of the kinds just mentioned, of corporation bonds, or of commercial paper, deposited with "National Currency Associations," which last were voluntary organizations, modeled upon clearing-house associations, although provision was made for their organization in country districts. These issues were limited in amount and were to be taxed at the very heavy rate of 5 per cent for the first month and 1 per cent for each additional month up to a maximum of 10 per cent. The act, it is evident, did not provide for a really *elastic* currency, varying with business needs, but only for an *emergency* currency. In 1913 the rate of taxation was reduced to 3 per cent for the first month, with a maximum of 6 per cent.

For several years no notes were issued under this statute, but in 1914 the outbreak of the European war led to large shipments of gold to Europe and to a small-sized panic in the money market. The issue of emergency currency possibly averted a more serious panic. Altogether, emergency notes to the amount of $386,000,000 were issued by 1363 different banks. All of these had been retired before the Act expired, by limitation, on June 30, 1915.

The Aldrich-Vreeland Act also created a National Monetary Commission, composed of senators and congressmen, to devise a plan for the general revision of the banking system. The plan recommended by this commission was one sponsored by Senator N. W. Aldrich of Rhode Island. It provided for a hierarchical organization of the banks of the country, with a central bank, the "National Reserve Association," at the top. Banks were to be grouped into local reserve associations, with functions not unlike those of the national currency associations of the Aldrich-Vreeland Act. The whole system was to be controlled by the banks rather than by the government. The widespread discussion of the Aldrich plan undoubtedly did much to awaken interest in the problem and to make the adoption of the federal reserve system possible.

The Federal Reserve System. — A revolutionary change in the banking system of the United States was brought about by the Federal Reserve Act of 1913. Under the provisions of this act the country has been divided into twelve districts and a central bank, named a Federal Reserve Bank, has been established in each district.[1] The system is under the general supervision and control of the government. At its head is the Federal Reserve Board, comprising five members appointed by the President, together with the Secretary of the Treasury and the Comptroller of the Currency. The stock of the various federal reserve banks is owned by local banks in the respective districts, called " member banks." National banks were required to become member banks, while state banks and trust companies are permitted to become member banks, provided they comply with certain standards imposed upon national banks by the national banking law and with other requirements set by the Federal Reserve Board. Each member bank subscribes to the stock of the federal reserve bank in an amount equal to 6 per cent of its own capital and surplus. Half of this must be paid for, and the other half remains subject to call. Any earnings of the federal reserve banks over a 6 per cent dividend to their member banks go, first, to accumulate a surplus equal to 40 per cent of the paid up capital stock, and, beyond that, to the United States Treasury. Each federal reserve bank is governed by a board of nine directors, six being elected by the member banks, and three appointed by the Federal Reserve Board.

Relations of Federal Reserve Banks and Member Banks. — The federal reserve banks are " bankers' banks "; that is, they do not accept the deposits of individuals nor do they lend directly to individuals. Their most important relations are with their member banks, and these may be summarized under the heads of (1) reserves, (2) rediscounts, and (3) note issues.

1. The federal reserve banks hold the central reserves of the

[1] The twelve federal reserve banks are located at New York, Boston, Philadelphia, Richmond, Atlanta, Cleveland, Chicago, Minneapolis, St. Louis, Kansas City, Dallas, and San Francisco. The Atlanta bank has a branch at New Orleans (with a special district assigned to it) and other branches may be established.

system. Three years are allowed for the gradual transfer of reserves from the banks which have held them in the past. After that period the requirements are as follows: A member bank may count as reserve only (1) money in its own vaults and (2) deposit credits with the federal reserve bank. Member banks in central reserve cities must maintain reserves equal to 18 per cent of their demand liabilities, of which at least one third must be money in their own vaults and at least seven eighteenths deposits in the federal reserve bank. In other reserve cities member banks must maintain 15 per cent reserves, of which at least one third must be in their own vaults, and at least six fifteenths must be a federal reserve bank deposit. Banks in other cities or rural districts must keep 12 per cent reserves; at least one third in their own vaults and at least five twelfths in the federal reserve bank. The federal banks, in turn, have to keep minimum reserves of 35 per cent of their deposits.

These provisions for minimum reserves of definite size must be interpreted as being, in part at least, a concession to American habits and prejudices. But the Federal Reserve Board is authorized to suspend temporarily any of these reserve requirements, imposing a graduated tax upon the amounts by which the reserves fall below the stated minimum limit. It is to be expected, moreover, that the federal reserve banks will normally hold reserves much larger than those required by law. This in itself will introduce a large measure of elasticity into the situation.

2. Rediscounting means the purchase by one bank of notes and bills of exchange held by another, the purchasing bank being protected by the selling bank's endorsement of the discounted paper. Rediscounting has not been a common feature of American banking practice, and there has even been a distinct prejudice against it, although it is very common in Europe. The new law makes it an essential part of the federal reserve system. Federal reserve banks may rediscount (for their member banks) short-time notes and bills of exchange "issued or drawn for agricultural, industrial, or commercial purposes," and conforming to certain specifications which have been carefully formulated

by the Federal Reserve Board. The privilege of rediscount is not extended to notes and bills of exchange issued "for the purpose of carrying or trading in stocks, bonds, or other investment securities, except bonds and notes of the United States." The purpose of this restriction is not only to prevent the resources of the federal reserve banks from being used to finance speculation, but also to limit their rediscounts to so-called "self-liquidating paper," that is, to notes and bills of exchange held against loans which the borrowers will, in the ordinary course of business, be able to repay from the proceeds of the sales of the goods produced or purchased with the aid of the borrowed funds.

The most important general advantage of this new rediscounting system is the help it will give in the development of a thoroughly elastic supply of deposit credit, expanding and contracting with the number and magnitude of business transactions. When, for example, the reserves of certain member banks are too low to permit them to advance deposit credits to their customers in the desired quantities upon even the soundest instruments of personal credit, they may replenish their reserves by sending part of their holdings of bills and notes to the federal reserve banks for rediscount. In order to equalize the supply of bank credit in different parts of the country the Federal Reserve Board may permit and even require certain federal reserve banks to rediscount commercial paper for other federal reserve banks. The Federal Reserve Board also has general supervising power over the whole rediscounting system, including power to revise the rediscount rates of the different federal reserve banks.

3. Under the new system, national banks may still continue to issue notes, as in the past, if they wish. The existing national bank notes, constituting about one fifth of the aggregate amount of money in the country, could not be suddenly withdrawn from circulation without serious consequences. But the Federal Reserve Act provides that the national banks may gradually get rid of their note-issue liabilities by selling the government bonds they hold as security for their notes to the federal reserve banks at par. The federal reserve banks, if they wish, may

utilize these bonds as security for the issue of federal reserve *bank* notes, which in all essentials are like national bank notes. The extent to which national banks will give up their note issues will depend very largely upon the price of government bonds.

More important, however, are *federal reserve notes*, issued by the federal reserve banks (1) in exchange for gold, thus becoming virtually gold certificates, and (2) upon the security of rediscounted paper held by them. A 100 per cent reserve is held against notes issued in exchange for gold; a 40 per cent reserve has to be held against notes issued on the security of rediscounted paper. This last reserve requirement may, in emergency, be waived by permission of the Federal Reserve Board, a graduated tax being imposed upon deficiencies in the reserve. This makes it possible, it will be seen, for member banks to secure currency for their own borrowers and depositors by sending paper to the federal reserve banks to be rediscounted, taking the proceeds of such rediscounts in federal reserve notes. This means that when the country needs more money for hand-to-hand circulation it can get it by exchanging personal credit instruments for federal reserve notes. Bank credit in the form of bank notes can now be expanded quite as readily as bank credit in the form of deposits. But it is not yet certain that an adequate mechanism has been provided for the speedy contraction of the note issue when the special needs that called for its expansion have passed. Federal reserve notes are redeemable at the issuing banks and (out of a redemption fund maintained by the banks) at the treasury in Washington, and no federal reserve bank which has received the notes of another federal reserve bank is permitted to pay them out, but must return them promptly to the issuing bank "for credit or redemption." Much depends then, so far as contraction is concerned, upon the rapidity with which federal reserve notes find their way back to some federal reserve bank.

Other Functions of the Federal Reserve Banks. — In addition to being "bankers' banks," the federal reserve banks, it is expected, will be bankers for the federal government. They may, under the law, be used as depositories for all the general funds of the government and may serve as "fiscal agents" of

the government in various treasury operations. This will make it possible for the government to use modern and economical methods in caring for its receipts and making its payments, and should also prove of advantage in its borrowing.

The federal reserve banks are also empowered to buy, sell, and borrow gold coin and bullion, the securities of the federal government, and the warrants and other short-time obligations of states and municipalities. They may also buy and sell bills of exchange arising out of either foreign or domestic trade. This last power enables them, in case of need, to come to the relief of banks not members of the system. Buying bills of exchange from other banks differs from " rediscounting " only in that in the latter process the bills to be rediscounted are normally and usually exchanged for deposit credits or bank notes. Under the law, federal reserve notes cannot be issued upon the security of " purchased " paper, but only upon paper " rediscounted " for member banks, nor can federal reserve banks give deposit credit to banks not in the system. This means that since " purchases " will usually involve a direct drain upon the reserves of the federal banks, their power of " purchase " is much more restricted than their power of " rediscount."

But there is a yet more important aspect of these authorized " open-market operations " in commercial paper. Only through the use of this power can the federal reserve banks hope to make their discount rates " effective " in the money market. Only in this way can they expect to " put on the brakes " when they think that bank credit is being expanded with dangerous rapidity or encourage free lending on the part of the banks when conditions are such as to make that policy seem desirable. Only in this way, moreover, can they protect their gold reserves by the use of devices similar to those which the Bank of England and other European banks have found effective. The existence of an " open market " for commercial paper means merely that commercial paper, instead of being held till maturity by the bank first discounting it, may be bought and sold freely, and may move from one city to another and even from one country to another, according to differences in prevailing discount rates.

In the United States open market operations of this kind are not yet of sufficient magnitude to give the federal reserve banks any large opportunity for exerting their influence. They are consequently endeavoring to stimulate the growth of open-market operations.

The federal reserve system has been very carefully devised for the purpose of getting rid of the principal evils inherent in the national banking system as it was. If given a thorough and fair test, it should accomplish that purpose. There is some danger that the new system may make possible a too easy and too rapid expansion of bank credit in periods of business prosperity, ending perhaps in reaction and crisis. But this danger is inseparable from any really elastic system of bank credit. With a wise exercise of the powers which the Federal Reserve Board has over discount rates and reserves, the alternations of periods of business prosperity and periods of business depression should be less frequent and less violent than in the past.

The most formidable obstacle to the success of the federal reserve system now apparent is the possible lack of cordial coöperation on the part of the banks — especially the smaller banks — of the country. Very few state banks and trust companies have become member banks, while a few member banks have given up their national bank charters and have withdrawn from the system. Despite the fact that the Federal Reserve Act modified the national banking law by permitting national banks to engage in various kinds of banking operations which had previously been prohibited, some of the bankers feel that membership in the system decreases their banking profits. Member banks no longer get interest on their reserve deposits (although this is compensated for, at least in part, by the reduction in the size of the required reserves) and, if they utilize the federal reserve banks as clearing and collection agencies for checks drawn upon other banks in the system, they lose some of the profits from certain charges that had previously been made for collections and exchange. The advantages of the system to individual banks will appear most clearly at time of crisis. But lessons of periods like that of 1907 are soon forgotten. The greatest advantages of the system, however, are its effects upon the commercial interests of the country as a whole. A particular banker may feel that he can share in many of the general advantages of the system without membership in it. It is to be hoped that this absence of a sense of individual responsibility for the general banking situation may not develop so far as to prevent the federal reserve system from attaining its maximum usefulness.

TABLE IV

COMBINED RESOURCES AND LIABILITIES OF THE FEDERAL RESERVE BANKS: JULY 21, 1916[1]

(In thousands of dollars)

RESOURCES		LIABILITIES	
Total reserve	377,343	Capital paid in	55,183
Five per cent redemption fund against federal reserve bank notes	450	Government deposits	54,277
		Member bank deposits	492,000
		Federal reserve notes[2]	10,120
Bills discounted for members	28,937	Federal reserve bank notes	1,692
Bills bought in open market	85,382	Other liabilities	251
United States bonds	49,746		
One-year treasury notes	7,190		
Municipal warrants	27,723		
Federal reserve notes, net	20,014		
Other resources	16,738		
Total	613,523	Total	613,523

The Present Position of State and Private Banks. — The figures in Table V give only a partial idea of the present position of banking in the United States, for while they are complete as to national banks, there were, in 1915, over 3000 other banks which failed to make reports to the Comptroller of the Currency.

"State banks," in the narrow sense, include only corporations chartered by the individual states to conduct a general commercial banking business. In a broader sense savings banks and trust companies incorporated under state law may be said to be state banks.

[1] Compiled from statements in *Federal Reserve Bulletin*, Vol. ii, pp. 426, 427.

[2] Federal reserve notes to the amount of $175,219,000 were outstanding at this date but a large porportion of these were covered by gold set aside for the purpose (and not included in the statement of resources) and others remained in the hands of issuing banks. The amount in circulation was $154,038,000.

TABLE V

NUMBER OF BANKS AND AMOUNT OF DEPOSITS IN SPECIFIED KINDS OF BANKS: 1915[1]

	NUMBER OF BANKS	DEPOSITS[2]
State banks	14,598	$3,277,772,000
Savings banks	2,159	4,997,706,000
Private banks	1,036	134,410,000
Loan and trust companies	1,664	4,204,596,000
National banks	7,605	6,569,859,000
Total	27,062	$19,184,343,000

Savings banks do not usually do a commercial banking business; that is, they are not engaged in the sale of bank credit in a form that can be used in making payments. Their deposit accounts are not usually transferable by means of checks. They receive deposits of small savings and invest them in long time securities, such as real estate mortgages and bonds of various sorts. They perform an important social service by stimulating saving and by increasing the financial power of small investors through concentrating and combining their resources. Savings banks are organized either as corporations or as mutual societies managed by a board of trustees acting for the depositors. The latter type is especially common in the eastern states.

Trust companies were at first organized to take charge of trust funds and to act as executors and administrators of estates. They have, however, developed the functions of both savings banks and commercial banks, and have even entered such specialized banking fields as foreign exchange and the underwriting of corporation securities. They have thus the character of free lances in the banking field. Their banking functions have developed so rapidly that in many states they have been put under no such rigid control as is exercised over state and savings banks.

Private banks are of two very distinct types. Some are small unincorporated banks in country towns. Others are great concerns in the financial centers which deal in investment securities, buy and sell foreign exchange, finance great corporate undertakings, and, in some cases, act as brokers in the stock market.

It is impossible, in fact, to draw a definite line between "banking" and

[1] Compiled from Report of Comptroller of the Currency, *Finance Report*, 1915, pp. 533, 595.

[2] Exclusive of inter-bank deposits and postal-savings deposits.

other financial undertakings. Building and loan associations, private money lenders, note brokers, dealers in investment securities, life insurance companies, etc., frequently perform functions which are very much like some kinds of "banking." But banking as the institution which converts personal credit into bank credit in the form of deposit accounts and bank notes is a clearly defined thing, and has a distinct economic significance of its own.

QUESTIONS

1. Explain the various items in the published "statement" of a national bank.
2. Because a national bank can buy interest-bearing government bonds and use them as security for its own issues of paper money, advocates of government paper money issues have alleged that it gets "double interest on its money." Is this true?
3. How should one compare the profitableness of issuing notes with the profitableness of extending deposit credit?
4. What restrictions does your state impose on state banking corporations?
5. Report on the note-issue systems of the Bank of England, the Bank of France, the Imperial Bank of Germany, and the Canadian banks.
6. Report upon the relative advantages of the promissory note and the bill of exchange as instruments of commercial credit.
7. Compare the provisions of the Aldrich plan with those of the federal reserve system.
8. Does the supply of bank credit involve the sacrifice of "waiting" on the part of anyone? Who are the real or ultimate lenders?
9. What are bank acceptances? trade acceptances? commodity paper?
10. Are bank notes more closely analogous to government paper money or to bank deposits?
11. What points of superiority have bank notes over government paper money?

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Withers, Hartley. *The Meaning of Money.*

CHAPTER XVI

OTHER PROBLEMS IN MONEY AND BANKING

The Value of Money. — We have not as yet answered one very important question, and that is, "What determines the value of money?" Now by the "value of money" we mean the purchasing power of money as reported or expressed by the money prices of other things. There is no such thing in fact as "the general purchasing power of money," although we have found it convenient to use that and similar expressions. Money has, in reality, a large number of different values, expressed by the different quantities of different things that it will purchase. If the price of wheat is one dollar per bushel, then one value — the wheat value — of money is a bushel per dollar. Similarly, the purchasing power of money in sirloin steaks may be four pounds per dollar. But how are we to blend sirloin steaks, wheat, and other things into one concept? The notion of the general value of money is simply a useful abstraction, based on a broad view of all its different specific values.

When we fix our attention upon *changes* in the various purchasing powers of money, however, we are able to make a distinction between changes that are widespread and general, and changes that affect only one or two commodities. For example, a new invention may decrease the price of a particular commodity, without affecting the prices of other things except (if the demand for the commodity is elastic) by shifting demand from other things to the commodity in question, — an effect which would usually be slight so far as the price of any one of these other things is concerned, for the demand would very likely be shifted from many different lines of consumption. Or, if the demand for the commodity in question is relatively in-

elastic, a diminution in its price may increase the demand for other things. But there are, on the other hand, price fluctuations which are widespread and which show a general trend in one direction or the other, and these we may call, with substantial accuracy, changes in the value of money. What are the underlying causes of these general changes in the values of money?

The Nature of the Problem. — Our first impulse, perhaps, is to suggest that there is no new problem here, that the value of money is to be determined in the way that other values are determined, and to seek to frame an explanation in terms of marginal utility and the general laws of supply and demand. But the task is not so simple as that. The analysis of marginal utility, it is true, formed the basis of our explanation of the shifting of demand from one commodity to another, but it does not help us to explain the demand for money. Marginal utility depends upon the capacity of things to satisfy human wants, and money does not directly satisfy a single human want, except the abnormal wants of the miser. We want money only as we want the things that money will buy for us.

And when we turn to "supply and demand" we find at first little help. For, it will be remembered, when we were discussing the relations between the prices of things and their supply and demand, we arbitrarily limited ourselves to the consideration of *one commodity at a time*. That is, we assumed that the money price of the one commodity we were considering was alone variable, and that the prices of all other things remained, for the time being, constant. The consumer whom we pictured as willing to buy a certain amount of a commodity at a certain price or a larger amount at a lower price, was, by our premises, merely comparing variable dollars' worths of the commodity in question with fixed dollars' worths of other things. All the values of money, save one, were held constant, so that the imaginary consumer simply had to equate the utility of larger and smaller marginal dollars' worths of the one commodity to their cost measured in a dollar that represented perfectly definite amounts of all other things. Now the problem of the

value of money (understood as the problem of general changes in the different values of money) cannot be approached in that way. For the problem of the value of money is merely the obverse of the problem of the money values of *all* other things. If we were studying the wheat value of money we could assume the sirloin-steak value of money to be held constant. But our present problem is that of the wheat value of money *and* the sirloin-steak value of money *and* all other values of money. We can't resort to the strategy of breaking the sticks in our bundle one by one.

The Quantity of Money and the Values of Money. — All this does not mean that there is no such thing as a "demand for money." Using the word money in its broadest sense, including all "rights to receive money" that are used in making payments, it is clear that every sale of a commodity may be viewed as a purchase of money, and every purchase of a commodity as a sale of money. Going a step farther, and remembering that one wants money only because of the things money will buy, we may say that every sale of one commodity is a purchase of the power of acquiring other things. A seller cares nothing about the quantity of money — the number of dollars — he gets in exchange for his goods, except in so far as these dollars have certain exchange relations with other things, including the things he buys as a consumer and the things he pays for under the head of "expenses of production." Similarly, a buyer cares not how much money he parts with in exchange for a definite quantity of goods, except in so far as the money has alternative uses of greater or less importance. The quantity of money — the *number* of dollars in the aggregate supply of the instruments in which payments are made — has no significance apart from the *values* of the dollars.

These two things — quantity and value — are in the case of money bound together in a peculiar way. They are, in a very real sense, not only interdependent but interchangeable. A small amount of money of high purchasing power per unit will meet the needs of both buyer and seller just as well as a larger amount of money of lower purchasing power per unit.

What are the conditions under which a general change in the values of dollars is possible? Let us simplify the problem by assuming that the change is absolutely general and uniform; that if, for example, the price of a bushel of wheat is seventy-five cents and the price of a bushel of corn is fifty cents, an increase in the price of wheat to a dollar and a half is accompanied by an increase in the price of corn to a dollar, and by a similar doubling of the money prices of all other commodities and services. Things retain, we shall assume, precisely the same exchange relations as before, *except with reference to money*. If prices have thus increased, all the values of money have diminished by one half. As an intermediary, then, as a means of obtaining other things, money has only half its former potency.

Sellers are demanding and receiving twice as many dollars as before for given quantities of goods; buyers are offering and paying twice as many dollars as before per unit of goods purchased. Remembering now that we are using the word money in its broadest sense, including exchangeable credit instruments, it is evident that twice as much money as before passes from buyer to seller in exchange for every unit of everything else that passes from seller to buyer. But this means that one of two possible conditions must exist. Either (1) fewer exchanges are being made, or (2) exactly twice as much money as before is being exchanged for goods and services. So we reach the very important conclusion that there must be a definite relation between general changes in the values of money and changes in its quantity. We need not as yet concern ourselves with the question of which of these two related things is cause and which is effect. But that these two things are inseparably bound up, the one with the other, should now be clear.

We may now state this principle in a somewhat broader form: *If the number of units of goods and services of every sort annually exchanged for money remains constant, any increase or decrease in the amount of money used in making payments must be accompanied by an exactly proportionate general increase or decrease in prices.* It is not necessary for the truth of this

theorem that all prices should change in the same proportion. The general change in prices may, for example, be upward, but some prices may rise by a smaller proportion or may even fall, provided these are offset by sufficiently large increases in the prices of other things. An "exactly proportionate" general change in prices merely means such changes in specific prices as will make possible an unchanged volume of transactions with the increased or decreased number of dollars used in making payments. A general increase or decrease in price is of course identical with a general decrease or increase in the various specific values of money.

The Equation of Exchange. — Some aspects of the general relation between prices and the quantity of money can be conveniently represented by using algebraic symbols. Let M represent the total amount of money in circulation, and let V represent its rate of turnover, or velocity of circulation, that is, the average number of times the various dollars in circulation are exchanged for goods or services during the year. Then MV will represent total money payments, measured in money units. Let T represent the total volume of trade, or, more accurately expressed, the total number of units of commodities and services exchanged for money during the year. Finally, let P represent the *average price per unit* paid for these commodities and services. The equation of exchange may now be stated in its simplest form:

$$MV = PT.$$

This equation, it is obvious, amounts to the statement that the quantity of money in circulation, multiplied by its average rate of turnover, is equal to the average price per unit paid for commodities and services, multiplied by the number of units sold. This, in turn, is equivalent to the yet simpler statement that the total amount of money paid for things during the year equals the sum of the prices of all the units purchased. Stated in this way, the equation of exchange is readily seen to be necessarily true. In fact, it is a truism, — an identity, almost, rather than an equation. But it is none the less significant,

for the truism which it states is one which has very often been forgotten.

Up to this point we have simplified our problem by counting as "money" everything, including credit instruments, expressed in terms of dollars and accepted in payment for other things. But there are some important problems connected with the relation of changes in the quantity of the generally accepted media of exchange (money in the "narrower sense") to changes in prices. So we shall now let M represent the quantity of the generally acceptable media of exchange, including metallic money, government paper money, and bank notes. The symbol M' will be used to represent the quantity of the transferable "rights to demand money" that are used in making payments. These consist, almost entirely, of bank deposits subject to check. Then the equation of exchange becomes:

$$MV + M'V' = PT.$$

This is a statement in algebraic symbols of the fact that the amount of money in circulation, multiplied by its rate of turnover, together with the amount of bank deposits subject to check, multiplied by their average rate of turnover, must be equal to average unit prices, multiplied by the number of units of things exchanged for money or for deposit credit. This equation is identical with the other one, except that a distinction is now made between money and bank deposits. The principal advantage of the use of the equation of exchange, in fact, is that it enables us to discuss the relations between general changes in prices and changes in the amount of metallic and paper money without becoming involved in difficulties of analysis and of exposition that would otherwise be very formidable. The problem becomes simply that of the relations between M and P in the equation of exchange.

If M and M' increase in equal proportion, while V, V', and T remain fixed, P must also increase proportionally. That is, *all other things being equal*, an increase in the amount of money in circulation and in bank deposits must be accompanied by a proportionate increase in prices. To what extent, in fact, are

these " other things " likely to remain equal? In the first place a sudden increase in the amount of money in circulation is very sure to increase T, the total volume of trade, by leading to increased purchases. But in the long run the increase or decrease of the total volume of trade must depend upon the natural resources of the country, the productive energies of the people, and the degree to which division of labor has been achieved. It can have no permanent dependence upon the amount of money in circulation. In the second place, a sudden increase in the supply of money is likely to bring about a temporary decrease in V, its velocity of circulation, because a larger amount of money may, for the time being, be kept idle. But, with a given volume of transactions at given prices, V must in the long run depend very largely upon the habits of the people with respect to the amount of " pocket money " usually kept on hand. Changes in habits of this kind are slow, and may safely be neglected in studying the movement of prices through even a considerable number of years.

When, in the third place, we come to consider the effect of an increase in M upon the magnitude of M', the amount of bank deposits subject to check, we find that these two things are necessarily connected. For an increase in M, the amount of money in circulation, is very sure to be accompanied by an increase in bank reserves. Additions to the country's stock of money will distribute themselves, ultimately, between bank reserves and hand-to-hand circulation, and the proportions of the country's monetary stock allotted to these two uses usually fluctuate only between more or less definite, even if gradually changing, limits. But an increase in bank reserves normally brings with it an increase on M', the amount of bank deposits subject to check. Even in the absence of minimum reserve laws, the ratio of aggregate bank reserves to aggregate bank deposits is found, for the time being, to fluctuate around an approximately constant proportion. An increase in M, therefore, is very sure to result in an increase in M'.

It follows, then, that despite a certain amount of variability in the other factors in the equation of exchange, an increase in

M, carrying with it a roughly proportionate increase in M', must normally have as its most important concomitant a similar general increase in prices. This, it will be noted, is in harmony with the conclusion we had already reached without the aid of the equation of exchange. But that conclusion was stated in terms of the "amount of money (and credit instruments) *exchanged* for goods and services," the volume of trade being constant. We now see that a similar conclusion holds true when stated in terms of *the quantity of money in circulation*, the only qualifying factors being probable changes of greater or less importance in (1) the rate of turnover of money, (2) the ratio of the amount of money in bank reserves to the total amount of money in circulation, (3) the ratio of bank reserves to bank deposits, and (4) the rate of turnover of bank deposits. Allowing for the influence of these qualifying factors, *an increase or decrease in the quantity of money, the volume of trade being constant, must be accompanied by a proportionate general increase or decrease in prices.* This principle, known as "the quantity theory of prices," has long been one of the most important theorems of economics.[1]

General changes in prices must, of course, accompany changes in any of the factors in the equations of exchange, unless these happen to counteract one another. If the volume of trade increases more rapidly than the supply of money, and other things remain equal, prices must decrease. This is the apparent explanation of the general fall in prices between 1873 and 1897. The growing use of checks in making payments is substantially like an increase in the supply of money. It increases the ratio of money in bank reserves to money in hand-to-hand circulation, and thereby increases the ratio of M' to M. Unless offset by changes in other factors, this must be

[1] Professor Irving Fisher, by making skillful use of such statistics as are available, has estimated the magnitude of the various items in the equation of exchange for each year since 1896. For one factor, the total volume of trade, Professor Fisher had to be content with *relative* figures, showing merely the estimated percentage changes in the volume of trade from year to year. By using merely his figures for M, V, M', V', and T, Professor Fisher was able to get values showing the relative year-by-year changes in P which agreed very closely with figures derived from the statistics of actual price movements. Similar estimates, based on somewhat less complete statistics, had previously been made by Professor E. W. Kemmerer. See Fisher, *The Purchasing Power of Money;* and Kemmerer, *Money and Credit Instruments in their Relations to General Prices.*

accompanied by rising prices. An improvement in the organization of the banking system, making possible a smaller normal ratio of aggregate bank reserves to aggregate bank deposits must also tend to increase prices. Along with a phenomenal increase in the quantity of money in the past twenty years there has been, in fact, a large increase in both the ratio of deposits to money and in the rate of turnover of deposits.

The Mechanism of General Changes in Prices. — Thus far we have considered only the *mathematically necessary* relations between changes in the quantity of money and general changes in prices. The quantity theory of prices, even when stated in the form of the equation of exchange, tells us nothing about the *process* of general price changes; nothing, that is, about the mechanism by which a change in the quantity of money operates to bring about general changes in prices. No one has ever given a complete description or analysis of this process, and doubtless no one description would fit all instances of general price changes brought about by changes in the quantity of money. But some aspects of the matter are tolerably clear.

Take an artificially simple case. Imagine an isolated community with no foreign trade and with no banks. Suppose that a group of men find a long-forgotten hoard of gold, large even as compared with the existing stock of gold in circulation. Without increasing their own activities as producers the finders are now able to purchase larger quantities of goods. These additional purchases, it is important to note, are the direct result of the increase in the supply of money, and could not have been made without it. The merchants into whose hands the money comes in turn expend it to replenish their stocks and for other purposes. And so the money passes from hand to hand, increasing the number of exchanges — the volume of trade — just about proportionately to the increase in money.

But this increase in the volume of trade cannot be the end of the process. More goods than before are passing into the possession of their ultimate consumers. The country's stock of exchangeable goods is being *depleted* more rapidly than it can be replenished out of the country's normal agricultural and industrial output. In short, the purchasing power of the com-

munity, *at the old level of prices*, is now more than sufficient to buy the current output. Under the pressure of competing purchasers, desiring to exchange money for goods, prices will rise. And if the industrial output cannot be permanently increased the rise in prices will be proportionate to the increase in the money supply, so that finally the larger supply of money will have brought with it no permanent increase in the number of exchanges.

The conditions under which general price changes resulting from an increase in the quantity of money occur in actual life are much more complex, and yet there is no reason to suppose that in its fundamentals the process is essentially unlike that which we have just outlined. There is, however, the difference that additions to the supply of money usually find their way at first into bank reserves, where their immediate effect is to lower the discount rate. This leads to increased bank lending and to larger bank deposits, and the immediate purchasing power of the community, in the form of its power to draw bank checks, is correspondingly increased. Increased purchases will be made, and so far as the immediate effect upon prices is concerned, it is immaterial that a large part of the increase may be in purchases of labor, raw materials, and supplies, *i.e.* in expenditures for "productive" rather than for "final" consumption. Prices must rise, and this will draw a larger amount of money into hand-to-hand circulation. With higher prices people will find it convenient to keep somewhat larger amounts of money on hand as "pocket-money." Finally, unless new disturbing factors appear, equilibrium will be reached between the amount of money in bank reserves and the amount of money in hand-to-hand circulation. It seems probable, then, that the sequence of processes by which an increase in the supply of money actually brings about a general increase in prices may often be (1) larger bank reserves, (2) lower discount rates, (3) larger bank deposits, (4) more purchases, (5) higher prices, (6) more money drawn into hand-to-hand circulation. Prices get their initial upward impetus from the larger bank reserves, but the increase in the amount of money in hand-to-

hand circulation helps to support and maintain the higher price-level.[1]

Thus far, however, we have neglected to take account of the very important facts, (1) that gold has other than monetary uses, (2) that the production of gold will itself depend in part upon its purchasing power, and (3) that international gold shipments are also partly dependent upon the relative purchasing power of money in one country and another. Leaving the last of these three topics for treatment in the following chapter in connection with the general subject of international trade, we pass now to the discussion of the other two.

The Relation of the Industrial Uses of Gold to Prices. — From the estimates of the Director of the Mint it appears that in recent years from one fourth to one third of the world's annual production of gold finds its way into industrial uses. The United States mints and assay offices refine nearly all the crude gold bullion produced in or brought to this country, and allow the depositor to take the proceeds in money or in bars of gold for industrial use, as he prefers. But even without this convenient arrangement there would be a constant balancing or comparison of the relative advantages of the industrial and monetary uses of gold. The number of dollars which can be got by selling gold *for* money and by actually converting gold *into* money must, of course, always be approximately equal.

More than that, there are two things quite distinct from the direct process of selling gold bullion for money which help to fix the ratios of exchange between gold and other things. Consumers, on the one hand, are constantly weighing the marginal utility of objects made from gold against the marginal utility of other things. Producers, on the other hand, are weighing the relative profitableness of producing things made from gold and things made from other materials. It is clear that gold will be distributed between its industrial and monetary uses in such a way as to equalize the exchange ratios of gold and other

[1] Cf. the testimony of Professor Alfred Marshall before the British Gold and Silver Commission of 1888, in *Appendix to Final Report*, p. 3.

things for the two uses.[1] If, for example, an increase in the stock of money (whether gold or not) results in increased prices (*i.e.* in decreased purchasing values of gold), a relatively larger amount of the gold annually brought to the mints will tend to flow into industrial uses, and thus to limit the increase in the amount of money and the consequent rise in prices.

The Relation of the Expenses of Gold Production to Prices. — There is another way in which society makes direct comparisons between the value of gold and the value of other things. Mining, like agriculture, is subject to the law of increasing expenses, and the tendencies of prices to equal the maximum expenses of production per unit holds true for both industries. Not only are there marginal mines, mines which it just pays to operate, but in the most productive mines there are margins, — certain depths, for example, beyond which the expense of mining more than eats up the value of the product. Through the operators of mines, society is continually comparing the cost in labor and capital of the production of gold with the cost, similarly measured, of the things that can be bought with the produced gold. If the gold produced at the margin will purchase things which consumers deem of less importance than other things which might have been produced with the use of no more capital and labor, capital and labor will gradually be shifted from their marginal use in gold mining to the production of other things. Here, then, as in the case of the balancing between the monetary and industrial uses of gold, we have a direct value-comparison of gold and other things.

Some years ago the Bureau of the Mint undertook an investigation into the relation of the expense of gold mining to the amount of gold produced. The conclusion reached is worth quoting in this connection:

> In every mining district there are mines producing at good profits, mines producing at small profits, mines barely paying expenses, and mines operated at a loss, but with the hope that they will do better. Every increase in costs would submerge the latter more deeply, add to the list of the un-

[1] The expense of transforming bullion into jewelry, etc., is left out of account, as it does not affect the principle under consideration.

profitable, and probably close some of them. . . . A higher scale of working costs will bring losing experiments to an earlier conclusion, reduce profits, and make mining ventures generally less attractive, and thus diminish the output.[1]

To summarize: Marginal utilities and subjective values are found in the industrial uses of gold. The particular form of the law of normal price that is operative in agriculture also holds true in gold mining (although it has to be stated in a somewhat different way). An increase in the supply of gold diminishes its marginal utility in industrial uses. This is bound to decrease the values of gold as money, on account of the ease with which the supply of gold can be shifted to one use or the other. Such a rise of prices, however, cannot continue indefinitely. The increase of prices and wages brings increasing expenses in gold mining, and, unless new gold mines are found or cheaper ways of getting gold from old mines are invented, the output of gold will have to decrease.

These things have a steadying influence upon prices. Tendencies toward extreme fluctuations in prices are held in check by the resulting changes in the expense of mining gold and by the automatic changes in the proportions of the annual gold product that flow into monetary circulation and into industrial uses. It is in these ways that the significance of the fact that the monetary *standard* is itself a commodity appears.

The Increase in the Production of Gold. — Although probably more gold was produced between 1850 and 1875 than from 1492 to 1850, yet, as Table I shows, the annual production of gold since 1896 has been from two to three times as large as it was between 1850 and 1875. Most of this great output of gold, as Table II indicates, comes from relatively few countries. At present the British empire supplies over one half and the United States (including Alaska) nearly one fourth of the total product. The causes of this enormous increase were, in part, the opening up of new gold fields in South Africa, Canada, Alaska, and Colorado, and in part the improvements in methods of extracting gold from low grade and refractory ores, in which

[1] *Report on the Production of the Precious Metals*, 1904, p. 41.

TABLE I

Production of Gold in the World since 1841

(From 1841 to 1885 the estimate is from a table of averages for certain periods, compiled by Dr. Adolph Soetbeer; for the years 1886 to 1912 the production is the annual estimate of the Bureau of the Mint.)

Period	Annual Average for Period	
	Fine Ounces	Value
1841–1850	1,760,502	$ 36,393,000
1851–1855	6,410,324	132,513,000
1856–1860	6,486,262	134,083,000
1861–1865	5,949,582	122,989,000
1866–1870	6,270,086	129,614,000
1871–1875	5,591,014	115,577,000
1876–1880	5,543,110	114,586,000
1881–1885	4,794,755	99,116,000
1886–1890	5,461,282	112,895,000
1891–1895	7,882,565	162,947,000
1896–1900	12,446,939	257,301,100
1901–1905	15,603,730	322,619,800
1906–1910	20,971,575	433,520,900
1911	22,348,313	461,939,700
1912	22,549,335	466,136,100

TABLE II

Recent Production of Gold in Different Countries[1]

Country	1897	1900	1904
Africa	88	13	129
Australia	97	111	132
United States and Alaska	86	119	121
Russia	35	31	37
Canada	9	42	25
British India	12	14	18
Mexico	11	13	19
China	9	8	7
All others	26	35	35
Total	355	385	523

[1] From *Journal of Political Economy*, vol. x, p. 580, and *Finance Report*, 1907, p. 363. The figures are given in thousands of kilograms.

connection the development of the "cyanide process" has been of special importance.[1] Dredging for gold in the beds of rivers which drain gold-yielding lands, is a very recent development of considerable importance. Notwithstanding the decrease in the value of gold, the bulk of the gold produced in California today is from ore bodies that twenty-five or thirty years ago were generally considered worthless.

The effects of this enormous output have been felt in both Europe and America in a general increase of both prices and wages. There are some who expect that the values of gold will continue to depreciate for a long time in the future. Account must be taken, however, of the automatic check which the increase in wages and prices is bound to put on the production of gold by increasing mining expenses. On the other hand, still further economies in productive methods are possible.

Some Economic Effects of Changes in the Values of Money. — We have seen that an increase in the amount of money available for bank reserves leads to the expansion of credit, stimulates business, and increases prices. The same results are achieved, although in not the same way, by a sudden debasement of the standard of value, or by the introduction of irredeemable paper money as the medium of exchange. Prices are gradually increased under such conditions, there being an unmistakable tendency to adjust them to the change in the "dollar" or other unit of the medium of exchange.[2] The rising prices stimulate business by increasing profits. Profits

[1] "There are many mines in operation now at a profit which could not have been worked at a profit ten years ago. There has been an important addition to the gold and silver product by the recovery of these metals from lead and copper ores by modern processes. The most important gains seem to have come, however, through economies in management, particularly by enlarging the scale of operations and by more complete extraction of the values from the ores treated." — *Report on the Production of the Precious Metals*, 1904, p. 41.

[2] Possibly the effect upon other prices of the increased prices (measured in the depreciated money) that have to be paid for imported commodities and that are received for exported commodities is the key to this problem, just as it was undoubtedly the chief cause of the rise of prices to fit the bullion value of coins from which seigniorage had been taken. This is the explanation of the rise of prices under the greenbacks suggested by Professor W. C. Mitchell, the historian of that movement.

are increased because most of the expenses of production are incurred before the goods are sold, so that the rise in prices increases the margin between prices and the expenses of production, and because, moreover, some of the expenses of production do not usually rise as rapidly as do prices. An expansion of business activity of the kind already described is apt to be the result, and this is not generally soon restrained by insufficient bank reserves, for depreciated money is usually, though not always, money that is coined or issued in large quantities.

That periods of prosperity induced in this way are inevitably short-lived and usually end in severe crises does not make them any the less real. Nor should the fact that such artificial conditions of business enterprise are apt to be accompanied by excessive speculation and other unhealthy features blind us to the fact that they accomplish some good. The encouragement given to venturesome undertakings leads to the trial of new methods of production, to the development of new natural resources, to undertakings of vast proportion, to a general freeing of industrial organization and methods from the restraints of habit and tradition. The foundations of modern large-scale industry in the United States were laid in the period between the Civil War and the panic of 1873. The period of state bank note inflation preceding the panic of 1837 was a period in which the industrial map of the United States was almost wholly changed, and, in the long run, for the better.

A rapid increase in the supply of standard money may have a similar effect. A tremendous expansion of international trade followed the gold discoveries in California and Australia. In the sixteenth century, increases in the supply of the money metals, historians are agreed, hastened the fall of the medieval economic system. The almost unparalleled development of industry and industrial organization in the United States since 1897 must, with its good features as well as its bad, be attributed in part to the increased supply of gold.

Business prosperity, however, does not always coincide with the real economic welfare of the masses of the people. If

prices are rising faster than money wages, real wages are obviously declining. A period of falling prices is very apt to be a period of increasing well-being for those whose incomes are wages or salaries, although here we have to remember that even if daily or weekly wages do not fall so rapidly as prices, an increase of unemployment may affect total yearly incomes adversely.

Crises. — Crises are frequently recurring phenomena of current economic life. They are of all degrees of severity, but are generally characterized by a scarcity of bank credit, a sudden drop in prices, a subsequent period of industrial depression, lack of employment for wage earners, and kindred symptoms.

Crises are frequently attributed to "over production," or, when that expression is criticized (because human wants are never fully satisfied) to "under consumption." The two expressions are different ways of describing the same thing, and both are misleading because they put the emphasis in the wrong place. Production and consumption have to do with *quantities* of things and their fitness to satisfy human wants. Crises spring from mishaps in the price process; they relate to what might be called the dollars and cents aspect of economic life. It is difficult, even impossible, for observers to analyze all the factors entering into a particular crisis, and it is even more difficult to formulate a theory of crises that will be of general applicability. There are some important things about crises, however, that are relatively well known, and these will form the basis of our discussion.

It is a significant fact that crises generally occur only as sharp interruptions of periods of business prosperity, when credit is abundant, prices relatively high, and employment plentiful. Whatever may be the cause of a period of exceptional business prosperity, it is apt to contain within itself the seeds of its own destruction. The point will appear clearly if we put together two conclusions that were reached in the preceding chapter: first, that the supply of loanable funds in the form of bank credit is a function of two variables, — the supply of personal

credit and the supply of money available for bank reserves; second, that personal credit is based on the probable amount of future money incomes and probable future prices of property.

Suppose, for example, that business conditions are prosperous and promise to continue so, and that there is a plentiful supply of money in the bank reserves. Expected prices and expected profits are large, expected interest payments seem certain. The power to get this future income depends, however, upon the possession of land, capital goods, franchises and other privileges, the established business relations that give rise to "good-will values," or upon the possession of income-yielding securities, such as mortgages, bonds, stocks, etc. Under such conditions, these things command good prices in the market and may easily be hypothecated, either formally or implicitly, in order to secure purchasing power, — bank credit. The bank credit thus created is put into further investments of capital and into the creation of further business opportunities. These things serve in turn, so long as their income-yielding power seems certain, as the basis of further extensions of bank credit, and thus the process of business expansion continues in a cumulative fashion. Overproduction, it is true, is present, but it is the overproduction of the means of production and of acquisition, — of railways, factories, and business schemes, — and it is accompanied by the overappraisal, the overcapitalization, of these things. An extensive period of increasing prosperity of this kind is, however, scarcely possible unless the supply of money is increasing; for bank reserves as well as the amount of expected personal incomes condition the supply of purchasing power. Very often, in fact, it may be a sudden increase in the supply of money available for bank reserves that gives the initial impetus to the rapid expansion of business. Larger reserves, lower discount rates, larger investments, an increased volume of trade, is as we have seen, the normal sequence in such cases. Periods of rising prices are periods of rising profits, for fixed charges, the rate of interest (even on new borrowings), and wages do not usually rise as rapidly as prices. These rising profits are, of course, the direct cause of

the overinvestment in production goods and the overcapitalization of business opportunities.

Any one of a number of things may be sufficient to precipitate a panic under such conditions. The whole business structure may fall to pieces through sheer topheaviness. That is, so much production today is indirect, so large a share of productive effort is devoted to forwarding in indirect ways the production of goods that will be ripe for human use only in the comparatively distant future, that the mere operations of supply and demand among business men themselves may maintain prosperous business conditions for some time. But in the long run the maintenance of the values of producer's goods and privileges depends on the demand, and hence on the income, of ultimate consumers. Wages do not usually rise as rapidly as prices in periods of business expansion. This simple fact may in itself keep the average purchasing power of consumers from expanding rapidly enough to furnish a solid support for the growing structure of capital values.

Crop failures may precipitate a panic by diminishing the purchasing power of those engaged in agriculture, and, possibly, by reducing exports and thus necessitating the taking of gold from the bank reserves to ship to Europe in payment for our imports. When the credit situation is at all strained, the failure of one important bank may be enough to precipitate a panic. The bank's creditors are prevented from meeting their own obligations; the solvency of others is in turn dependent upon them, and thus losses in expected and often already hypothecated income are transmitted from firm to firm and from industry to industry in a constantly widening circle. The reduction of bank reserves by reason of the flow of money into hand-to-hand circulation in order to effect exchanges at the higher level of prices may itself be a contributing cause of a panic.

In fact, whatever may be the immediate cause of a panic, it is bound to grow, in a condition of inflated capital values, with tremendous rapidity. The collapse of credit leads to forced sales of property in order that credit obligations may be met. These reduce prices, lessen the security on which credit is

founded, and render banks less able and less willing to make loans. Moreover, the hoarding of money, which is apt to be a feature of a panic, has a destructive effect on bank reserves. In a serious panic the liquidation of obligations has to work itself out. Then the industrial process starts afresh, with lowered values imputed to capital goods and to business opportunities, and with property rights shifted, in some measure, to creditors.

Crises seem to be unpreventable so long as competition and the credit system dominate in industry. Yet there are some recent developments that may make them less frequent, and possibly less serious.

The " integration of industry," whereby a whole series of productive processes, from the production of the raw material to the sale of the finished product, are brought together under one management, decreases the number and complexity of credit relations between producers, and tends to prevent the undue expansion of those parts of the productive process that are farthest removed from the consumer. The strong position of the steel industry in the United States is a case in point. The improvements in the bargaining power of wage earners resulting from their organization have enabled them partly to prevent the widening of the gap between wages and prices in prosperous times, as recent American statistics show. On the other hand, crop failures are and always will be a factor of uncertainty. The best way of softening the rigors of a panic and of restoring normal conditions promptly is through a wise use of the lending power inherent in a system of really elastic bank reserves, just as the best way of preventing panics is through a firm control of discount rates when all other conditions are ripe for a period of business inflation. It is in these ways, perhaps, that the new federal reserve system can best serve the country.

The Standard of Deferred Payments. — The relation of changes in the purchasing power of money to long-time debts and credits has some very important aspects. If prices increase, the principal of a loan represents less purchasing power at the time of repayment than at the time the loan was made. If prices

decrease, the reverse is, of course, true. In periods of cheap money agitations the additional burdens imposed upon debtors in a period of decreasing prices are emphasized. An important function of money, then, is found in its use as a *standard of deferred payments.*

There is a partial, but only partial, compensation for the injustice to debtors and creditors resulting from general changes in prices in the fact that the interest rate usually increases when prices increase and decreases when prices decrease. This is largely because rising prices increase profits, thus inducing business men to pay higher interest rates in order to secure larger supplies of funds for investment; while falling prices decrease profits and lessen the demand for loanable funds. The result of this is that the changing purchasing power of the principal of a loan is to some extent offset or discounted by changes in the rate of interest. The decline in interest rates as prices fall makes it possible for debtors to pay off their old obligations with funds borrowed at a lower rate of interest. Creditors cannot so easily take advantage of the fact that interest rates are increasing when the purchasing power of the principal of their outstanding loans is decreasing. Nevertheless, more emphasis has been given to the question of the standard of deferred payments in periods of declining prices, when debtors are injuriously affected, than in periods of rising prices, when creditors are the losers. The United States is rapidly ceasing to be a "debtor nation," and the farmers, in particular, are becoming less distinctively a "debtor class." We may expect, therefore, that in a future period of declining prices we shall hear less about the injustice of our variable standard of deferred payments.

Index Numbers. — General changes in prices are indicated statistically by the use of index numbers. An index number, in the most general sense, is some magnitude which *varies with* some other magnitude or complex of magnitudes, and whose variations can therefore be taken as representing or *indicating* the other variations. In studying the variations of the price of some specific thing we need no index number; but when we

have to deal with the variations of many different prices, we find the use of index numbers necessary.

The simplest way to form an index number of general changes in prices is, first to select a list of things whose prices are to be taken into account, next to ascertain the average price per unit paid for each of these things in each successive month or year of the period being studied, and finally to take the *sum* of these unit prices in each of a number of successive months or years as the index numbers. Such index numbers show the variations in the total expense of a purchase consisting of *one unit each* of the commodities included in the list. Thus if bananas of a certain grade sell at a certain time for 15 cents a dozen, oranges at 40 cents, and peaches at 25 cents; and if a month later the prices are 20 cents for bananas, 50 cents for oranges, and 20 cents for peaches, the summed prices used as index numbers are 80 cents and 90 cents respectively. This means merely that the total money cost of a dozen each of these fruits has increased by $12\frac{1}{2}$ per cent.

For some purposes we get more significant results by *weighting* the specific prices in accordance with the relative importance of the different commodities. If, for example, we think that twice as many bananas as peaches are ordinarily used, and three times as many oranges as peaches, we may take as our *weighted sum* at the earlier date, .25 plus (2 × .15) plus (3 × .40), or $1.75. For the later date the weighted sum is $2.10, indicating a general rise of 20 per cent in the retail prices of this small group of commodities. Accurate weighting is thus of great importance in forming index numbers from a small list of price quotations. If a very large list of prices is used, weighting becomes of less importance, for there is no necessary connection between the importance of a commodity and the degree to which it has risen or fallen in price. Errors due to the lack of weighting or to imperfect weighting thus tend to offset each other. But even with a large and thoroughly representative list of prices, the highest degree of accuracy in index numbers cannot be reached without careful weighting.

Index numbers are, however, more often constructed as *averages* than as sums. Thus the ordinary *arithmetic averages* of the prices of these kinds of fruit at the two dates are .80 ÷ 3 and .90 ÷ 3, or .27 and .30 respectively. The *weighted* arithmetic averages are 1.75 ÷ 6 and 2.10 ÷ 6, or .29 and .35. The averages, of course, indicate the same proportionate general change in prices as do the sums, but when the price list is large the use of the average makes the series of price changes somewhat more easy to inspect and interpret.

It is a common practice in making index numbers to substitute *relative* prices for actual prices before summing or averaging them. The price of each commodity at each date is set down as a *per cent* of its price at some one specific date (or of its average price during a certain period). Thus, in the illustration already given, if we use the earlier date as the "basing period," the price per dozen of each kind of fruit is set down as 100. The relative prices in the later period then are: bananas, 133; oranges, 125; peaches, 80. This gives an unweighted sum of 338, and an unweighted arithmetic average of 113, indicating an average relative change in prices of 13 per cent. Relative prices may also, of course, be combined by means of weighted sums and averages. Index numbers utilizing relative prices should be constructed and interpreted with great caution, because the results will vary according as one period or another is used as the basing period. If, for example, in the illustration already given, prices at the *later* date are used as the basing prices, average relative prices at the earlier date become 93, indicating an average increase of only a little over 7 per cent instead of the 13 per cent indicated when the earlier prices were used as bases. When a large price list is used this particular source of error becomes of less (though not of negligible) importance. But there remains the difficulty that for periods remote from the basing period this method exaggerates a rise in prices and understates a fall.[1] It is accordingly sometimes desirable to use *chain index numbers*, in which the relative prices

[1] This grows out of the fact that a price cannot fall by more than 100 per cent but can rise without definite limit.

for each successive period are stated or expressed as per cents of the prices in the period immediately preceding. That is, the base is repeatedly shifted from one period to the next.

In constructing an index number from relative prices, other kinds of averages than the ordinary arithmetic average may sometimes be wisely used. The *median* relative price is the one which divides all of the relative prices for a given date into halves, — one half being lower and one half higher than the median. The median is easy to find and easy to interpret. Less used are the *mode*, — the relative price that occurs most frequently at a given date, and therefore shows what is in a way the most "characteristic" price change, — and the geometric average, — the nth root of the relative prices of n commodities. The geometric average has a number of advantages. It gives less weight to extreme price variations than does the arithmetic average; geometric averages of relative prices show just the same general price changes as geometric averages of actual prices; and the results obtained are alike whether one date or another is chosen as the basing period. It is, in principle, the correct average to use when the problem is not that of finding the change in the *aggregate purchasing power* of money, but the (mathematically) different problem of finding the general change in the different *ratios of exchange* between money and other things.

In general, whether one kind of index number is better than another usually depends upon the character of the available data and the use that is to be made of the results. For example, if the problem is that of measuring the change in the cost of living of the laboring classes, the best index number is a sum or average of actual prices, weighted in accordance with the relative importance of the different items in the expenditures of typical laboring-class families. Sometimes changes in prices bring about such changes in the relative amounts of different things purchased that if, for example, we are comparing the cost of living in two periods rather far apart, we shall get different results according as we weight our index numbers in accordance with expenditures in one period or the other.

TABLE III

INDEX NUMBERS OF WHOLESALE PRICES, WAGES, AND THE COST OF LIVING IN THE UNITED STATES: 1890–1912

YEAR	WHOLESALE PRICES[1]	WAGES[2]	COST OF LIVING[3]
1890	112.9	100.2	105.6
1891	111.7	100.5	105.8
1892	106.1	101.8	103.7
1893	105.6	101.6	104.6
1894	96.1	96.7	98.3
1895	93.6	98.2	96.0
1896	90.4	99.0	94.6
1897	89.7	99.3	94.7
1898	93.4	99.6	97.1
1899	101.7	103.0	99.5
1900	110.5	107.0	105.3
1901	108.5	110.2	107.5
1902	112.9	114.4	112.6
1903	113.6	119.8	114.5
1904	113.0	122.6	115.0
1905	115.9	125.5	115.3
1906	122.5	132.0	120.0
1907	129.5	137.1	125.8
1908	122.8	133.5	125.4
1909	126.5	132.9	130.0
1910	131.6	137.6	135.2
1911	129.2	141.0	133.3
1912	133.6	145.2	141.0

[1] *Bulletin of the United States Bureau of Labor Statistics*, No. 173, p. 126. An unweighted arithmetic average of the (relative) average yearly wholesale prices of about 240 commodities. Price quotations used are so chosen as to constitute in themselves a rough and unsystematic weighting. Average actual prices from 1890 to 1899 are used as bases.

[2] From W. I. King, *The Wealth and Income of the People of the United States*, p. 195. Weighted average of the relative average wages per hour for male wage earners in various manufacturing industries, railroad transportation, mining, and agriculture. By reason of paucity of data these index numbers and those of the cost of living are subject to wider margin of error than those for wholesale prices. The basing period includes the years from 1890 to 1899.

[3] From King, *op. cit.*, p. 180. A weighted average of statistics for (1) retail prices of food, (2) cost of fuel and light, (3) cloth and clothing, (4) house furnishing goods, and (5) miscellaneous items. Relative prices are used throughout and are per cents of average prices in the period from 1890 to 1899.

It is often important to know the *distribution* as well as the general trend of price changes. The range of variation of the different relative prices might, for example, be comparatively large above the average and comparatively small below it. These are various ways of measuring and stating the distribution of price changes but their adequate consideration would lead us into matters too technical for discussion here. The whole matter of index numbers is full of subtle difficulties, some of them mathematical, but more of them demanding primarily a clear-headed analysis of the economic problems involved.

Index numbers of prices and wages are available for the United States for the period since 1860, and some figures have been compiled for earlier years. For the period 1860–1880 Mitchell's [1] are the best; the period from 1890 to the present is covered by the United States Bureau of Labor Statistics [2] and for the gap from 1880 to 1890 Falkner's are available.[3] Several financial journals also publish tables of price changes.[4]

Some writers have suggested the possibility of a *tabular monetary standard*, to be maintained by frequently changing the money unit in accordance with the showings of an officially kept system of index numbers. To do this by periodically altering the amount of bullion in standard coin would be impracticable,[5]

[1] In his *Gold, Prices, and Wages under the Greenback Standard.*

[2] In various numbers of the *Bulletin of the Bureau of Labor Statistics.*

[3] In *"Aldrich Report" on Wholesale Prices, Wages, and Transportation,* Senate Doc., 32d Cong., 2d Session, No. 1394.

[4] For an account of modern index numbers of wholesale prices see *Bulletin of the Bureau of Labor Statistics,* No. 173 (July, 1915), Part ii.

[5] Professor Irving Fisher has suggested that the dollar might be "stabilized" by making the real monetary standard a variable amount of gold bullion. According to his plan, gold coins of the present weight might be retained, but if the official index number should show advancing prices, the mint price (in gold bullion) of gold coins would be slightly increased and at the same time the gold coins in circulation would be made redeemable at the treasury in (nearly) as much gold bullion as constitutes the increased mint price of the coin. If prices show a continued tendency to increase, the gold dollar would virtually become a gold certificate for a considerably larger amount of gold bullion than it contains. This plan could be so operated, Professor Fisher believes, as practically to eliminate general price changes. It is clear that no one nation could introduce such a plan, because it would cause highly objectionable fluctuations in the price of foreign exchange and in the domestic prices of imported goods and of important exports. It could be adopted for inter-

while to abandon the use of a standard commodity and to attempt to regulate prices by issuing fiat money and controlling the amount in circulation would be, as we have seen, chimerical. *A tabular standard of deferred payments* might be put in operation by laws providing for the increase or diminution of the principal of debts according to changes in prices. It is probable, however, that this would be satisfactory to neither debtors nor creditors. Moreover, should the tabular standard of deferred payments be adjusted according to changes in the prices of commodities, or according to changes in wages and other incomes, or according to general changes in the prices of commodities *and* services? The really essential thing is to have a commodity standard of value that shall be as stable as possible, and to maintain the convertibility of all other forms of money with it. With gold as the standard of value, and with all other forms of money redeemable in gold, changes in prices are not apt to be rapid enough to work much injustice to either debtor or creditor. The compensating influence of changes in the interest rate must also be taken into account. The question of the grievances of debtors and creditors has been overemphasized as compared with the really important economic problems growing out of general changes in prices. These are, as we have seen, first the effect on business enterprise, and second, the effect on the purchasing power of money wages and other forms of money incomes.

QUESTIONS

1. Construct simple index numbers for wholesale prices, in one city, covering a period of a few weeks. (Use the market quotations in a daily paper as data.)

2. How should one construct index numbers that would show the fluctuations of P, in the equation of exchange?

3. If half the money in the world were destroyed, would prices be doubled? If half the gold in the world were destroyed?

national use, as Professor Fisher shows, in the form of a (variable) gold-exchange standard. But there are many practical difficulties in the way of such a change.

4. Would an increase of $1,000,000,000 in bank notes have the same effect on prices in this country as the importation of $1,000,000,000 in gold?

5. Explain the mechanism by which a *decrease* in the quantity of money affects prices.

6. Report on the changes of prices, of bank reserves, and of bank deposits accompanying the crises of 1893 and 1907.

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CHAPTER XVII

INTERNATIONAL TRADE

The supply of gold, the development of trade, money, banking and credit, in short all the economic forces and institutions discussed in the chapters immediately preceding, take on special complexity when they become international in scope. The fundamental principles underlying international trade and credit are the same as those underlying domestic trade and credit — a truth too frequently forgotten — but trade between two countries in which language, banking institutions, monetary units, and monetary legislation are different presents special problems which call for separate treatment.

Foreign Exchange. — In the beginning a brief description must be given of the mechanism of foreign exchange. In international as in domestic trade, only a small amount of money is used, compared to the enormous money values of the goods exchanged. Purchase is set against sale, debt canceled by credit, and money is employed only for the occasional settlement of balances. This cancellation of offsetting claims is effected by the banks and bankers who engage in foreign exchange. Their work is indispensable in the development of foreign trade. The European War, for instance, by interrupting traffic between Europe and South America opened up large export possibilities to American manufacturers; but it was found impossible to take large or immediate advantage of this opportunity, partly because the necessary banking and credit connections had not been established between South America and this country.

As illustrative of the processes of foreign exchange, let us take our trade with England. Ordinarily, an American exporter who has sold goods to England draws an order — a *bill of exchange* — on the English debtor, directing him to pay the claim

at some specified time and place in London. American importers, on the other hand, commonly pay their foreign balances by buying bills of exchange or drafts on London, and sending them to their English creditors. In this way American debts and credits are balanced in London without transferring any money at all, except occasionally to settle the balance of indebtedness.

Bills of exchange drawn on a commercial debtor are usually accompanied by bills of lading, insurance receipts, certificates of weight and origin, and all the documents necessary to give the purchaser of the bill full title to the goods until the bill is accepted or paid. They are accordingly referred to as " documentary bills " or " commercial bills," to distinguish them from " bankers' bills " and other instruments of international credit described hereafter. Documentary bills are freely negotiable, passing from hand to hand by indorsement, and gathering strength with each new indorsement. It is important, also, to note the difference between " sight bills " and " long bills," the former calling for payment upon presentation, the latter usually for immediate " acceptance " by the drawee [1] and payment after thirty, sixty, or ninety days. The price of long bills is fixed by the price of sight bills and the discount rate in London.

We may now enlarge our simplified illustration to something like life size. Documentary bills drawn by exporters or creditors all over the country are sold by the drawers to bankers, usually New York bankers, who may be called the " wholesalers of exchange." The sale may be either direct or through exchange brokers, " the jobbers of exchange." These documentary bills are sent by the New York banks to their foreign correspondents

[1] "Acceptance" of a bill definitely obligates the acceptor to pay it. Many importers arrange to have bills drawn upon them accepted by some bank, protecting the accepting bank by a deposit of collateral and paying it a commission for its services. Bills accepted by banks ("bankers' acceptances") command a very low rate of discount, and are for many reasons very desirable elements in an "open discount market." The federal reserve banks are seeking to develop the use of bankers' acceptances in the United States. National banks are now empowered to accept bills of exchange originating in foreign trade.

for collection (in the case of sight bills) or acceptance (in the case of long bills). The balances thus built up abroad by the New York banks constitute the fund against which they draw their own bills. These are sold directly or through smaller banks — the "retailers of exchange" — located in all parts of the country. Foreign exchange is sold in a great variety of forms — bankers' drafts, travelers' checks, travelers' letters of credit, commercial letters of credit, cable transfers, and the like — descriptions of which may be found in the references given at the end of the chapter.

The illustrations used above, while typical of a large part of the foreign exchange of this country, fail to represent adequately the complexity which marks some of the interactions of international credit. An illustration of the more complex class is found in the "three-cornered" or "triangular exchange." We import from, very much more than we export to, South America. A part of the debit balance — though possibly not the larger part at the present time — is settled by the transmission of London drafts to our South American creditors, who can use them advantageously in the settlement of their debts in Europe. Our rate of exchange with any particular foreign country is therefore controlled not by our trade with that country, but by our dealings or general balance with the rest of the world; and London "clears" for the world as New York "clears" for America and Paris for France. Just as the net balance of our domestic trade is struck in New York, so final international balances are cleared or settled in London, although London's preëminence in international exchange is not now so striking as it has been in the past. The European war transferred, for the time being at least, a considerable amount of this business to New York.

The question next arises how the price or rate of exchange is determined. The factors controlling the price or rate of exchange are as numerous and as difficult to trace as the influences which affect the price of any economic good of world-wide purchase and sale. However, to facilitate discussion, we may classify them as: (1) the amount of pure gold in the monetary

units which are to be exchanged, (2) the cost of shipping gold, and (3) "general credit conditions."

An English pound sterling contains as much fine gold as 4.866 American dollars, and when exactly this amount must be paid in New York for a draft or order for one pound payable in London, exchange is said to be *at par*. Sterling exchange and German exchange are usually quoted in dollars and cents, *i.e.* the amount of American money required to buy one pound or four marks respectively. Consequently, they rise or become dear when exchange mounts above par. French exchange, on the contrary, is usually quoted in francs, the number of francs purchasable with one dollar; and it is consequently cheap when above par and dear when below par. Exchange between the United States and countries with silver or paper standards lacks the steadying influence of a par determined by the actual mass of fine gold in the respective units of value, and hence fluctuates much more than exchange between countries on a gold basis. In order to be as brief and clear as possible, the following discussion will be confined to exchange between countries on a gold basis.

Fluctuations in the rate of exchange depend chiefly upon the "general credit conditions" mentioned above, but it is plain that upper and lower limits to these variations are established by the actual cost of shipping gold. Suppose, for a moment, that it costs two cents to transport $4.866 worth of gold bullion between New York and London. Except under unusual circumstances, then, sterling exchange could not rise above $4.886, nor fall below $4.846. Such limits are frequently spoken of as the "gold points," "specie points," "shipping points," or "export and import points"; and it is necessary to mention them because of their frequent employment in discussions of foreign exchange. But they are usually defined in much too definite terms. The cost of shipping gold varies with the size of the shipment, with freight, insurance, and interest rates, and in some degree with the steamer and the season of the year. Furthermore, gold is so important as the basis of bank credit in all parts of the world that it is frequently imported regardless of the rate of exchange. During the war between Russia and

Japan, for instance, the Bank of France imported large quantities of American gold in this semiarbitrary way in order to protect reserves. The " gold points," then, while in one sense very real, represent extreme limits and are in themselves variable.

Within these extreme limits set by the cost of shipping gold, the rate of exchange varies according to general credit conditions, *i.e.* with the supply of and demand for bills of exchange, with discount rates here and abroad, and the innumerable forces which influence discount rates. Suppose, for instance, that our imports of merchandise in a given season greatly exceed our exports of merchandise. The demand for bills on London would greatly exceed the supply of bills on London, and the price of sterling exchange would rise very high if no other factors were involved. But it may happen at the same time that interest rates in New York are higher than in London, and under these circumstances our foreign creditors may prefer to lend their balances in New York in order to earn the high rate of interest obtaining there. The placing of these loans in New York will in turn reduce the demand for foreign exchange, and thus moderate both the interest rate and the rate of exchange.

After the beginning of the European War, conditions became exactly the reverse of those assumed in the preceding illustration. Europe bought enormous quantities of goods in this country, there was an unprecedented excess of exports over imports and a corresponding drop in the rate of exchange. We loaned large sums to Europe, extending credits to foreign purchasers and buying government securities. We also bought back a very considerable quantity of American securities. All this is indicative of the dependence of international trade upon international credit and banking, of the fact that if we sell to foreigners we must buy from them or give them credit, of the interdependence of foreign exchange, interest rates, and the territorial distribution or placing of credit. But it is more indicative, perhaps, of the facts that the stock of gold is a world stock, that the credits resting upon it tend to flow to the point where they command the highest price, that the foreign exchanges evince normally a strong aversion to the actual move-

ment of gold, and that trade balances are for the most part settled by the shifting of credits and securities.

This interaction of the domestic and the international money markets gives rise to a number of complex transactions which can only be suggested here. In discussing, on page 347, the sale of foreign exchange, American bankers were described as drawing against credit balances which they had built up abroad. Some bankers' bills, however, the so-called "finance bills," are drawn *in excess* of the foreign balances, and thus represent borrowings abroad. Finance bills are used (1) to tide over the time before a plentiful supply of documentary bills is available; and (2) to take advantage of low discount rates abroad, *e.g.* in London, by borrowing in London and lending the proceeds in New York. Under the latter circumstances, finance bills payable in London at sixty or ninety days are sold in large quantities in New York, the sellers commonly covering their risk by the purchase of future drafts calling for the payment of the same amounts in London at the dates when the bills mature. The finance bill is thus one of many credit instruments used to bring the loanable funds of the world to the market where they will command the highest rate of interest; and it is hardly necessary to add that it assumes at times a highly speculative character. "Bankers sometimes purchase outright entire new issues of securities from corporations with proceeds obtained by the issue of finance bills, sell the securities to investors during the currency of the finance bills, and apply the proceeds realized through the sale of the securities to the payment of the bills at maturity." [1]

Regulation of the Gold Supply. — As explained above, comparatively little gold is used directly in international trade. Yet there is nearly always some movement of gold. In the regular course of her foreign trade, London is constantly shipping and receiving gold, and the same is true in a general way of this country. In January, 1914, for instance, $10,442,373 in gold was imported, while the exports of gold in the same month amounted to $6,914,056.

[1] A. W. Margraff, *International Exchange*, p. 41.

In normal times, the discount rate is frequently used to regulate the distribution of gold, particularly in countries having central banks. International banking houses keep funds in both the United States and Europe, and they are constantly shifting their money to the market in which it will earn the highest rate of interest. The means employed to move their funds may vary, as has been explained, all the way from the simple sale of foreign exchange to the actual importation of gold. So great is the influence exercised by the discount rate over the gold supply that the Bank of England, as we have seen, usually finds it necessary to do nothing more than raise its discount rate when it desires to attract gold to England or discourage its exportation. But it is important here not to confuse the causal relationship. The discount rate does not control the flow of gold any more truly than the flow of gold controls the discount rate. The two are mutually dependent, and both in turn are subject to other independent influences.

The ordinary price level, that is, of merchandise, similarly affects the rate of exchange and the movement of gold. When prices abroad are high compared with American prices, foreign countries increase their purchases, the supply of American bills increases, sterling exchange falls, and if it goes low enough, may cause the shipment of gold to this country. Such a condition of affairs, for instance, is likely to occur in the autumn months, when large exportations of American cotton, wheat, and agricultural products create a plethora of bills on London, and other things being equal, depress the price of sterling exchange.

There can be no doubt, then, that the price level does influence the movement of gold. It seems equally clear that the gold movement influences prices. Some opponents of the "quantity theory" of prices hold that it does not, maintaining that before a drain of gold, for instance, could raise prices, it would so elevate the discount rate that the drain would be checked. In their view, the discount rate acts as a safety valve, through whose variations any protracted gold movement which threatens to disturb the price level is checked and reversed before it acquires

the momentum requisite to accomplish the larger task. But this assertion is for present purposes irrelevant. It makes little difference whether the supply of gold acts through the discount rate or directly. It acts. And we may be sure at least that if the movement of gold continued indefinitely, prices would unquestionably be affected. Nor should it be forgotten that a low discount rate itself affects the price level. In any event no country need fear the exhaustion of its specie. A protracted excess of imports over exports commonly arouses apprehensions on the point. Such fears are groundless. A continued outflow of gold raises discount rates, tends to reduce prices, and so draws back the specie through either new loans or new purchases or both.

The gold supply thus adjusts itself automatically to the respective demands of the various districts of the world. This truth is important because it establishes a *prima facie* presumption against laws or policies which interfere with the normal distribution of the precious metals. This presumption is only an initial one, however. It does not follow that "artificial" interference with the distribution of the gold supply is never warranted. Gold is purchasing power, representing universal and instantaneous command over men and things, and as the foundation of bank credit it is not too much to say that upon it modern industrial civilization rests. The governments of to-day are dependent in many ways upon the banks, and for this reason the movement of gold must continue to be as responsive to national political demands as to interest rates and prices. Gold may be obtained not only in the course of international trade, as that term is ordinarily understood, but by liquidating international debts. From the period just preceding the Balkan War until the outbreak of the European conflict, Europe steadily liquidated or sold back its American securities, inspired either by a general feeling of political insecurity or by definite prevision of approaching hostilities. Gold moved in this case in obedience to forces at once political and commercial; the regulation was both "natural" and "artificial."

In times of war, panic, or severe financial stringency, extraor-

dinary expedients for obtaining gold are sometimes used which, like the heroic remedies employed in desperate illness, are necessitated by the exigencies of the situation. In the scramble for gold which precedes a war or attends a panic, the country or the individual who stands aloof and waits for the normal laws of distribution to bring him " his " share of the gold supply may have cause to regret his inaction. Nevertheless, it is true that such expedients, like strong drugs, are to be used with great caution. They are frequently employed when the situation does not demand them, their use tends to become a fixed habit, and they seldom accomplish more than the postponement of the crisis. An expedient of the kind described was employed by Mr. Shaw, then Secretary of the Treasury, in the spring of 1906. The following critical account of the action of the Secretary may be unjust to him, for it must be remembered that the financial stringency of the time threatened to become dangerous; but it illustrates in a striking way the subtle modern devices sometimes used to increase the supply of gold.

"On April 14 it was officially announced for the first time, that the Secretary would allow any depositary bank which engaged to import gold to anticipate the arrival of the gold by withdrawing a like amount in cash from the Treasury upon pledge of savings-bank collateral as security. The sum so withdrawn was to be regarded as a temporary loan, and to be returned to the Treasury as soon as the gold arrived. In providing such an arrangement, Mr. Shaw virtually reduced the cost of importing gold by the amount of interest during transit, and raised by so much the 'gold import point.' In other words, he endeavored to make it profitable for the depositary bank to import gold without waiting for sterling exchange to fall to the normal 'gold point.' . . . In accomplishing this, Mr. Shaw temporarily eliminated, so far as the national banks were concerned, one item of expense in their foreign exchange operations. He gave them an advantage, for the time being, over all other firms engaged in the same business; and his action naturally excited criticism among the private bankers who found themselves discriminated against. Critics also attacked his method of announcing his decision. It appeared that several days before the public or the other banks were informed of his intention, Mr. Shaw had seen fit to make private arrangements with two New York banks for gold imports under the plan . . . Nor was hostile criticism mitigated by the general publication at this moment of the fact, which had not been widely known before, that one of these same banks had been favored by the Treasury for

several weeks, and possibly months, preceding, with virtually the same privilege under a different guise. This had been accomplished by allowing the bank in question to count as part of its reserve its importations of gold during their period of transit to New York. The imported gold had thus been made practically available as a basis for loans from the moment of its purchase abroad, and the item of time cost in such imports had been as completely eliminated as under the subsequently adopted plan. . . . His [Secretary Shaw's] statement issued at the time seemed to indicate that, in his opinion, the natural movement of gold was toward this country, but that the flow was being lured to other markets by the practices of European banks. He apparently hoped to overcome what he took to be an artificial diversion of gold from the United States by adopting, through the agency of the Treasury, measures similar to those which were being employed by the French and German central banks." [1]

It is this fear of panic and fear of war that to a large degree explain the actual shipment of gold, with its risk, expense, and loss by abrasion. If we could be assured of permanent peace and had a perfect credit system most of the gold movement would be unnecessary. If London were entitled to a gold balance from New York, a negotiable instrument evidencing that debt would under most circumstances suffice; or the gold could actually be set aside in the vaults of the New York subtreasury, marked with a London label and held until an opposite state of exchanges made it necessary to change the labels.

The Balance of Trade. — Although credit devices make it unnecessary to settle current trade balances with gold, the notion still persists that an excess of merchandise exports is a good thing and an excess of merchandise imports a bad thing. We still speak of the former as a " favorable " and of the latter as an " adverse " balance. To sell abroad as much, and to buy abroad as little as possible still seems the ideal of many well-meaning legislators and intelligent journalists.

Suppose for the purposes of discussion that the United States succeeded in prohibiting imports for a long period, while at the same time it succeeded in selling a large amount of merchandise to foreign purchasers. What would happen? Evidently a large portion of the money of the world would accumulate in

[1] A. P. Andrew, *Quarterly Journal of Economics*, Vol. xxi, pp. 544–546.

the vaults of American bankers, interest rates would fall, — possibly to rise again later, — and eventually, if the process continued long enough, the prices of American commodities would ascend to such a level that foreign nations would be unable to continue buying in this country. At this point, evidently, our hypothesis breaks down, and we are forced to conclude that the original supposition was an impossible one.

This hypothetical case and its *reductio ad absurdum* are sufficient to establish certain important pratical conclusions. The first is that a country cannot permanently sell goods for money alone. If it produces large quantities of the money metals, it will regularly sell those metals for the goods and services of other nations. If it produces no gold or silver itself, it will secure them through exchange; although, even in this case, gold and silver are likely to constitute only a minor part of its imports. Perhaps the gravest error one can commit in studying an international trade balance is to treat it as an exchange of goods for money. It is not even an exchange of goods for goods. The true international balance is one of claims against obligations, of credits against debits. The complete statement is that the goods, moneys, and services rendered by one country to other countries, plus its claims and credits of all kinds, will be balanced by the goods, moneys, and services received by the same country plus its debts and obligations of all kinds. Or, to put the matter concretely, we must include, along with the exports and imports of merchandise and bullion, the *invisible exchanges*, loans which the country makes or receives, annual interest payments on loans and capital invested abroad, repayment of loans or the purchase of securities, earnings of ships, insurance premiums, and commissions of all kinds for international services, governmental expenditures in foreign countries for diplomatic service, payment of subsidies and war indemnities, remittances of immigrants, expenditures of travelers, and a thousand and one other items, all tending, according as they depress or raise the price of foreign exchange, to bring about the importation or exportation of gold for the occasional balancing of the account.

A mere glance at this list of items entering into foreign trade is

sufficient to puncture the old mercantilist idea that a " favorable balance of trade " or an excess of merchandise exports brings about an increase of the money supply. This idea is as fully refuted by commercial statistics as by economic analysis. In the thirty-three years, 1874–1906, for instance, we had a large excess of merchandise exports in all except four years, but there was an excess of gold imports in only sixteen years. So, similarly, there was probably little truth in the statement heard so frequently when the previous edition of this work was published (1908), that our then " favorable balance " indicated that the United States was settling its indebtedness to foreign capitalists, repurchasing American securities owned abroad, and thus bringing the control of American enterprises more completely into the hands of Americans. It may have meant this, to be sure, but it more probably meant that we were paying England in goods for carrying and insuring our exports, or that foreign owners of American securities were taking in this form the annual interest or profits due to them. That excess of exports represented the continuance of indebtedness rather than its liquidation.

For the same reasons an " unfavorable balance of trade " or an excess of merchandise imports is open to a variety of different interpretations. It may mean that foreign capital is investing more heavily in the country under discussion, or that the latter country is taking, in the form of consumable commodities, interest and profits on investments which it has previously made abroad, or that it is selling its holdings in foreign enterprises and taking the proceeds in the form of consumable goods. An " unfavorable balance " of trade may thus be, in reality, highly encouraging; and a " favorable balance " indicative of national waste and extravagance. The precise meaning of any particular balance can be determined only after the most careful study, and no dependence should be placed upon the offhand interpretations of casual investigators. The great truth is that there must be some sort of balance between the credits and liabilities of any country, and that in practice a nation must be willing to buy if it is anxious to sell.

A scholarly analysis of the foreign trade of the United States, with a careful interpretation of the meaning of the trade balance at various periods, may be found in the *North American Review* for July, 1901, from the pen of Professor C. J. Bullock. Professor Bullock's explanation of the balance in two or three periods may be given, in order to illustrate the variety of factors which must be taken into account when dealing with this subject. In the period 1789–1820 the imports of merchandise and specie exceeded the corresponding exports by $511,000,000, and our obligations were further increased by interest on foreign capital invested in the United States to the amount of $200,000,000 approximately. This total indebtedness of something over $700,000,000 was offset by the earnings of the American merchant marine, estimated at about $800,000,000 for the period in question. "So far, then, from the country being drained of its money in payment for the balance of imported merchandise, the banks held not less than $20,000,000 of specie in the year 1820; while Gallatin and Crawford estimated that there had never been more hard cash in circulation."

In the decade 1831–1840, owing to the high prices current in this country, imports exceeded exports by $159,700,000; the imports of specie also exceeded the exports by $50,650,000; and the earnings of our merchant marine, $90,000,000, sufficed only to reduce this "unfavorable balance" to about $120,000,000. This remaining balance is accounted for by new foreign investments in the United States, in particular by foreign purchases of state bonds. "Our large imports of merchandise and specie had been made necessary by the movement of foreign capital toward the United States."

In the decade 1851–1860 the merchandise imports again exceeded the exports by $355,800,000; the net amount due to foreign creditors was somewhere between $100,000,000 and $130,000,000; and to offset these adverse balances our merchant marine earned in this period only $158,000,000. The remaining balance in this case was covered by our large excess of specie exports, which amounted to $417,608,000, and was due to the discovery of gold in California. "The United States had become one of the leading gold-producing regions, and the course of the exchanges was inevitably altered."

In the periods briefly described above, the striking factors in our international trade were, respectively, the earnings of our merchant marine, new investments of foreign capital in the United States, and large specie exports following the discovery of gold in California. In the last period, from 1874 to 1896, our exports both of merchandise and specie greatly exceeded our imports. "This meant simply," concludes Professor Bullock, "that the country had assumed its normal position as a debtor nation on the various items of invisible exchanges, and was paying annually something like $122,500,000 on such accounts."

The movement just preceding the European War was marked by features of unusual interest. From 1910 to 1914 this country had a normal excess of exports. In April, 1914, however, an "adverse" balance showed itself,

and in the same month gold began to flow to Europe; the $50,000,000 mark was reached in the middle of June and by the end of November the excess of gold exports amounted to $175,000,000. In the beginning the outflow of gold was attributed to the Underwood tariff, which stimulated imports by reducing duties. But gold continued to flow for a considerable time after the excess of merchandise imports had given way to an unprecedented excess of exports. As a matter of fact the continued exodus of gold was due far more to a wild scramble for gold abroad, particularly on the part of Russia; to the forced "importation" of American securities from Europe; and to large European loans placed in this country than to the excess of merchandise imports in the spring of 1914. The movement of American securities, it may be noted, began long before the declaration of war and may possibly have marked the initial preparations for that conflict.

Despite the continuance of heavy European borrowings, our decreased importations from Europe and our heavy exports, especially of munitions, turned the tide in December. The excess of gold imports over gold exports grew month by month, being nearly $80,000,000 in October alone. For the year 1915 the excess of gold imports amounted to $420,500,000.

Restriction of International Trade. — In ancient times among many nations, such as the Hebrews and Chinese, contact with other peoples was feared and foreign trade was practically prohibited. In Greece and Rome the greatest thinkers entertained a profound contempt for trade, based in part upon the belief that in exchange one party is usually cheated; and this prejudice was partially justified by the character of the primitive trader, who was part sailor, part pirate, part merchant, and took all the profit he could possibly extort in every transaction as insurance against the great risks of his calling.

At a later date, in the Middle Ages, when commerce between the semi-independent cities of western Europe increased, trade came to be highly prized by the average citizen, although it was still condemned by the philosophic schoolmen; and it was regulated in the most exclusive spirit.

"Every effort was made to keep trade as much as possible in the hands of native citizens. For example, the Venetians forbade the Germans from engaging in trade with the East by way of Venice, and the citizens of Lübeck strove to keep the Baltic trade from the Dutch. . . . Foreigners were mistrusted and partnerships with them were forbidden. Foreign visitors were restricted in many ways in their commercial dealings with native citi-

zens. Many occupations were closed to them; the length of their sojourn and the number of their visits were limited; they could not pass a town without exposing their wares for sale and paying the required market dues. The wants of the consumer took precedence over those of the producer or merchant. At the weekly markets consumers could supply their needs before the baker or merchant was allowed to make purchases. There was a community interest in the supplies of necessities, and often their exportation was prohibited. The trade of neighboring peasants was restricted to the home city, and laws regulating price, weight, measure, and quality were common. This restrictive municipal policy was very much relaxed at the great fairs which were held periodically in various parts of Europe." [1]

In the early modern period Mercantilism became dominant. Commercial policies were controlled by the desire to get and keep the precious metals. At first the exportation of specie was prohibited; merchants trading abroad were compelled to bring home cash for the goods they had taken out with them; foreign merchants trading within the home country were compelled to exchange their cash for domestic goods before they departed; exportation — except the exportation of raw materials needed in the manufacturing industries — was encouraged; and importation — except in the case of the precious metals and the skilled artisans who were encouraged to immigrate — was discouraged or prohibited. When it became apparent that the supply of money had to be secured through international trading, the greatest emphasis came to be laid upon the "favorable balance of trade"; and means, ranging all the way from bounties to war, were vigorously employed to secure the carrying trade for native ships.

Much mercantilistic legislation was immoderate, some of it barbarous, most of it marked by short-sighted national jealousy. Adam Smith has held it up to scorn. Some later writers have defended it as in the main necessary. No verdict on the subject needs to be given here. It accompanied the welding of the great modern states; and the consolidation of the smaller autonomies probably removed more restriction and more petty mercantilism than the new consolidation called into being.

[1] G. M. Fisk, *International Commercial Policies*, pp. 15, 16.

In a large historical sense Mercantilism was merely a cry elicited by one of the sharpest of the world's great growing pains. It was a symptom more than a cause or an explanation. It marked the establishment of the division of labor on a territorial basis, and recorded the replacement of the independent economy of the Middle Ages by the modern economy of exchange. For the latter, money was indispensable, and had to be secured at any cost.

The mercantilist period has been followed — after a brief *laissez-faire* reaction in some countries — by the period of protection in which we still linger. The extensive taxation of imports still continues; but trade prohibitions and export and transit duties have been largely abandoned in the more advanced countries. In the United States export duties are prohibited by constitutional law. But few nations have wholly risen above mercantilist practices. Canada prohibits the importation of oleomargarine and similar substitutes for butter; Great Britain prohibits the importation of sugar from countries paying bounties on its production; Switzerland levies an export tax on cattle, hides, and skins shipped from the country; Norway and Sweden tax the exportation of timber; and Russia still attempts to control the Persian trade by levying transit duties upon goods passing through her territories destined for Persia. But export and transit duties in their old mercantilist uses have nearly disappeared.

Extensive use is still made of export taxes for revenue purposes in South America and the Orient; and trade prohibitions based upon grounds of sanitation, morals, and what is generally called the "police power," are increasing rather than decreasing. Turkey, for instance, levies an ad valorem tax of 1 per cent upon all exports; and in general the most important tropical products are still subject to export taxes. As for trade prohibitions the continued necessity for their occasional employment is illustrated by our federal law authorizing the President to suspend the importation of any article which he regards as "dangerous to the health or welfare of the people of the United States." [1]

[1] For a more complete enumeration of modern export duties and trade prohibitions, see G. M. Fisk, *International Commerical Policies*, Chap. vi.

Nature and Advantage of International Trade. — It is obvious that there must be some restriction of foreign trade. Fiscal necessity, for instance, forces most countries to raise a large part of their national revenue by import duties. Until a few years ago, " free-trade " England raised more national revenue from customs than any other single source of taxation. Trade restrictions have existed as long as international trade itself, and the real problem is not whether there shall be any restriction but where and when particular varieties of restraint are justifiable. To answer that question it is necessary to make some examination of the nature and advantage of international trade.

By far the most important truth in this connection is the simple fact that trade is a necessary part of the process of production. Production consists of the creation of utility. The production of time and place utility is the primary function of trade. Trade, therefore, is as beneficial, as truly productive, as agriculture or manufactures. The American people are just as truly engaged in production when they buy pulp from Norway as when they cut down their own spruce trees to be manufactured into " yellow journals."

Trade is not only productive in the sense that it creates utilities, but it is an indispensable part of the division of labor. Men specialize in the production of those things in which they excel. A manufacturer of shoes may be a skilled cabinetmaker as well, but except for recreation he will not make his own furniture. By specializing in shoes he can buy with shoes, or the proceeds of their sale, more and better furniture than he could make with his own hands. An individual who makes anything for himself must figure as part of the cost of production what his labor could be sold for in other fields; and he obviously loses money if on this reckoning the thing he makes costs more than it could be bought for on the open market. The same is true of communities. The city that by grants of land or the remission of taxes manufactures within its own borders things that it could buy more cheaply outside, loses by the transaction. Not only individuals but communities and nations must specialize if the maximum productivity is to be secured. There is a

territorial as well as a personal division of labor, and trade is of the essence of both.

Exchange remains profitable, even though one of the parties is superior in all-around productive efficiency. A good lawyer may be able to do better work on the typewriter than his typist. But it will still pay the lawyer to specialize in law and to buy the stenographic service which he needs. Suppose that we were suddenly brought into contact with a country over which we had a universal productive advantage. Everything would be cheaper here; competition would force the other country to buy from us in all lines; gold would flow from that country to this; prices would fall there and rise here; in time an equilibrium would be reached and the other country would sell to us the things in which our productive advantages were least important. Articles of export and import would sell at the same prices in both countries except for the cost of carriage. Wages and the prices of non-transportable commodities might differ widely in the two countries, even after the new equilibrium had been reached. The question is not how much wages labor receives, but what it costs in money to produce transportable goods; and these costs may be identical (transport costs included) while wages differ widely, owing to differences in the productive efficiency of labor in the two countries. Each country manufactures the product in which it has a *comparative* advantage and buys with these products other goods which it needs. It specializes in the production of those things in which the comparative cost is lowest. This is the *law of comparative costs*. If a group of individuals insist on making something which they could buy for less than it costs them to make it — counting their labor as cost at what it would bring in other lines of industry — there is a comparative loss.

But what of the non-transportable goods, — houses and the like? Assume a state of civilization in which the sole articles of consumption and production are flour, cloth, and houses. Assume that the United States produces flour and houses, buying its cloth from England, and securing by such specialization or division of labor more cloth than we could otherwise secure.

Suppose the trade in cloth to be closed and the United States forced to manufacture the cloth it needs. Capital and labor would be diverted from the production of flour and houses to the production of cloth. More houses and more flour would have to be paid for a given quantity of cloth. A given quantity of flour or house accommodation would buy less cloth than formerly. In general there would necessarily be less flour, cloth, and houses than before; the general productivity of labor and capital would be reduced; and houses would be affected exactly like flour and cloth by the lowering in the general level of productivity. Non-exportable goods might be cheap or costly; that would depend upon the productivity of labor and capital in each country. But that productivity is directly affected by the productivity of labor engaged in the production of export goods, and if the productivity of the latter is lowered the productivity of the former will also be reduced.

The fundamentals of the problem are not changed by the introduction of money. When the importation of cloth was stopped England for a time would continue to buy flour; but, the price of cloth being raised, our purchases would fall off at once; specie would move from England to this country; prices would rise here and fall there; capital and labor would be attracted to the production of cloth; wages as well as prices would rise here. This is the initial and obvious effect of trade restriction. For a time it raises prices and money wages and gives a fillip to trade by making it profitable to start a new industry. It is no wonder that protection is so popular. It is an industrial stimulant.

But the sequel is different. The flow of specie from England reduces wages and prices there, including the price of flour, and in time England will be forced to produce more flour for herself. This means a stimulus to the flour industry in England and a corresponding decline of the flour industry in this country. England's "stimulant" comes later. Trade restrictions tend therefore, in the first instance, to raise wages and prices in the country imposing them; but in the long run they produce alternating periods of depression and activity in both countries,

and enable one country to injure another by forcing the latter to readjust her industries and even to produce things she would prefer to secure by purchase. Tariff tinkering is one of the most fertile sources of international friction and unquestionably one of the major provocatives to war.

Up to this point our consideration has been confined to two countries in the same stage of development, with no great differences in wages and interest. What if one country is newer, less exploited, and has a higher level of wages and interest?

It will be noted in this case that labor and capital would be migrating from one to the other, with or without tariff restriction. If, however, the country with higher wages imposes a tariff on cloth, as assumed above, the migration of capital and labor would be hastened. The development of the cloth industry in the younger country would draw some of the labor and capital previously engaged in producing cloth in the older country. The subsequent decline of the flour industry in the younger country, however, would probably not send capital and labor back to the old, because there would be better opportunities in the younger country. We can see no escape from the conclusion that trade restrictions of this kind do tend to hasten migration to the country where real wages are on the higher level. The effect of such migration is curious and interesting. Many writers hold that it does not permanently increase the population of the newer country, but merely substitutes immigrants and their offspring for descendents of the older pioneers; while in the older country population is not reduced owing to the infinite expansibility of the labor supply within the limits determined by the accustomed standard of living. But these phenomena need not be considered here. Whatever happens will be due chiefly to the fact that real wages and income are higher in the one country than in the other. Tariff restrictions exercise only a minor influence in this connection.

What if the older country had a positive tariff policy, with import duties on some products, when the new country was discovered and began to develop a foreign trade? In accordance with the reciprocal influence upon the division of labor noted

above, existing trade barriers would unquestionably exercise an influence, probably a deleterious influence, upon the distribution of capital and labor in the younger country. If the older country had heavy import duties on agricultural products, the expansion of agriculture in the newer country would be retarded and the development of manufactures stimulated. There can be no doubt about the power of one country injuriously to affect the division of labor in another. But will it pay the younger country to adopt countervailing or retaliatory duties? Can it secure the ideally perfect distribution of labor and capital by retaliatory restrictions?

In theory this is partially possible. Revert to the illustration in which under normal conditions the younger country would produce flour, the older country cloth, and both countries houses. Suppose the older country to place a tariff on flour so that more flour and less cloth would be produced there. In all probability the older country would be forced to continue the importation of some of the flour which it consumed. Under this hypothesis the younger country could set in motion partially corrective forces by placing an export duty on the shipment of flour, by giving a bounty on the production of flour, or by levying an excise duty on the production of cloth within its borders. It is interesting to note in this connection that England, in order to counteract the protective influence of the import duties which fiscal necessity forces her to use, imposes an excise duty of equivalent burden on the same goods produced within her border, thus counteracting as far as possible any influence which the import duties might otherwise exercise on production.

In practice, however, such corrective measures are nearly useless. No country knows what the ideal or normal division of labor for her would be. Moreover, export duties and bounties are costly to administer and liable to abuse. Conceivably, of course, trade interference by one country may become so unreasonable, so unsettling, so capriciously injurious, that other countries may be forced to protect themselves. For instance, one country may deliberately adopt the policy — by giving

bounties or preferential freight charges and the like — of preventing the development in another country of an industry in which the former is specially interested. Under such circumstances other countries may be justified in protecting an established industry by the necessary retaliatory legislation.

The general political and social aspects of protection are discussed in the next chapter. They furnish, as will be seen, some theoretical justification for trade restriction. Surveyed as a purely commercial question of dollars and cents, however, the profitableness of the unregulated territorial division of labor is beyond all question of doubt, in the opinion of the authors; and the history of international trade fully confirms the bald theory here outlined. That theory has been exposed to the most searching practical test to which any economic theory could be subjected, and it meets the test successfully. If the theory of comparative costs is correct, it follows that so long as the comparative costs of producing goods vary among the different nations of the world, so long there will be some international trade. Furthermore, since it is impossible to conceive that the costs of producing all kinds of transportable goods will ever be exactly proportional in the several countries of the world, it is evident that international trading is bound to continue. International trade can be permanently suppressed only by raising freight charges to prohibitive level, or by deliberately manipulating tariffs so as to suppress every new international trade connection as soon as it springs up, or by the complete destruction of industry in other parts of the world. According to theory, then, international trade is for practical purposes irrepressible and the ideal of an exclusive home market is a delusion.

This theory, as stated above, has been subjected to the most searching test. During the last fifty years trade restriction has been piled on trade restriction and protective tariff walls have been built higher and higher. But there has been no diminution in international trade. On the contrary, it has increased and developed by leaps and bounds.

QUESTIONS

1. In what respects does foreign exchange differ from exchange between two American cities?

2. What are the principal influences which affect the rate of exchange?

3. Is the gold supply distributed according to the needs or the respective demands of the various countries? Are needs and demands in this connection identical?

4. Mention as many methods as you can by which governments have endeavored to increase the supply of gold.

5. What is meant by the law of comparative costs? Is the American custom of importing the finer textile fabrics and manufacturing the coarser ones an effect of this law?

6. If a widow needs money so badly that she is willing to pay 200 per cent a year for its use, is it wrong for a money lender to charge this rate?

7. What is the real nature of the balance of trade? Does our excess of exports (merchandise) mean that we are paying off our foreign indebtedness, or merely that we are paying interest on our foreign indebtedness?

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CHAPTER XVIII

PROTECTION AND FREE TRADE

We are now in a position to review intelligently the *pros* and *cons* of the modern tariff controversy. Because of the limitations of space, the discussion will be confined almost wholly to American conditions, although most of the arguments are applicable to other countries as well.

The Case for Protection. — 1. One of the most captivating arguments for protection is the assertion that it promotes *nationalism*, which is held to be a good thing. Domestic trade, it is claimed, draws the citizens of a country together, while international trade is cosmopolitan and tends to their separation. Upon the creation of our federal government, state tariffs were abolished and their place taken by a national tariff designed partly to protect the whole of the country against the rest of the world. The introduction of national protection thus went hand in hand with the promotion of internal free trade; and Professor Schmoller even maintains the general thesis that, historically, this double process of internal abolition and external extension of tariffs marks the formation of new states, particularly federal states. Protection against foreign competition, he asserts, is thus historically coincident with the enfranchisement of internal trade; and has as its main object the creation of a strong national economic unity, without which permanent political unity, he thinks, is impossible. The validity of this argument, it will be noted, depends largely upon the truth of the assumption that the development of a strong feeling of national unity is a thing to be desired.

2. Government should, the protectionists say, foster *infant industries* in order to develop our natural resources and to pro-

duce diversity in industrial pursuits. It is admitted that protection is temporarily expensive, but so is the prohibition of child labor temporarily expensive. We prevent children from earning a little while they are young in order that they may earn more when they are old. For the same reasons trade unions rightfully insist that apprentices shall be given a broad knowledge of the trade they are learning, although it is more profitable for the employer to have them specialize early in some narrow branch of the work. So, similarly, protection prevents a nation from specializing too exclusively in its undeveloped stage, in order that it may the sooner arrive at industrial manhood.

Economists have generally admitted that there is a certain amount of truth in this argument. If an industry gets an early start in a given district, this locality is likely to retain its advantage because of the concentration there of capital and labor acquainted with the requirements and possibilities of the industry. Thus 63.3 per cent of all the needles, pens, hooks and eyes, manufactured in this country are made in Connecticut, for no other reasons that one can see than those suggested in the explanatory phrase — "the momentum acquired by an early start." And this localization of industry is artificially fostered by the practice, common to exporters all over the world, of selling abroad more cheaply than at home. The export trade seems to be universally coddled. Of course, such localized industries can be maintained only when the cost of transporting the article is small; and when other districts do not possess unusual natural advantages in the way of accessibility to superior raw material, power, or skilled labor. The census studies in the localization of domestic industries[1] seem to indicate that while the industrial inertia of which we have been speaking is an important factor, it is not so important as the opposing forces making for territorial diffusion of industry.

A most interesting illustration of an attempt to crush the "infant industries" of a competing nation is found in the effort of English manufacturers

[1] Special Census Report, *Manufactures*, 1905, Part i, p. cclx. *Cf.* also, Twelfth Census, *Manufactures*, Part i, pp. cclx–ccxiv; and Thirteenth Census, Vol. viii, Chap. vii.

after the War of 1812, to recover the American market of which they had been temporarily deprived by the long period of nonintercourse. "English manufacturers, eager to regain control of the lost markets, sent in shiploads of cotton and woolens and iron manufactures, which they offered on the most liberal terms to their agents in this country. The goods were taken on credit and disposed of at auction. The object was to undersell at any cost, and thus break down the infant industries. Lord Brougham justified the speculative character of this trade on the ground that 'it was well worth while to incur a loss upon the first exportation, in order, by the glut, to stifle in the cradle those rising manufactures in the United States which the war had forced into existence contrary to the natural course of things.'" [1]

3. Closely connected with the preceding arguments is a defense of protection based upon grounds of war and *military necessity*. Industrial independence, it is asserted, prepares a nation better for international war. There is unquestionably a great deal of truth in the argument. Germany has deliberately used protective tariffs to preserve herself at least in part as an *Agrarstaat*, and there has already been striking evidence of the wisdom of her policy of maintaining a large measure of economic self-sufficiency. Certainly a wise nation will see to it that within its boundaries factories exist which can manufacture arms and all the necessary munitions of war. Success in war is not dependent upon arms and ammunitions alone. There must be a plentiful supply of money, and whatever use may be made of credit, enormous amounts of money must be raised by taxation.[2] The source of taxation is a flourishing condition of private industry; and the industry of the average nation dependent upon international trade cannot flourish in times of war. But even the ability to secure public revenues in adequate quantities is less important in time of war than the ability of a nation to feed and clothe its people and its armies when international trade is suddenly cut off. The failure of the South in the Civil War was very largely due to her industrial dependence upon the cotton export trade. A sufficient diversification of industry to

[1] Coman, *Industrial History of the United States*, p. 185.

[2] For a classic explanation of the dependence of both public credit and taxation upon a flourishing condition of private business in times of war, see Henry C. Adams, *Public Debts*.

prevent industrial paralysis and to insure an adequate supply of the necessaries of life in times of war is, we believe, manifestly desirable.

4. The *home market argument* for protection naturally follows. Much that is said in defense of this claim is childish or silly. One distinguished American economist seriously maintained that a country can remain permanently prosperous only on condition that what is taken from the soil shall be returned in manure and other kinds of fertilizers, and that this will be accomplished only when the products of the soil are consumed at home. A much stronger application of the argument, however, is found in the assertion that the home market is superior because it is a surer market. A foreign market is usually a precarious market. It is likely to be closed by war or by capricious changes in tariff policy. Protection is unquestionably expensive to the country that protects, but in the long run it is worth paying something to keep industries in continuous operation.

5. This brings us to the argument for protection as a *defense against "dumping."* By dumping is meant the sale of products abroad at prices lower than those charged at home. Dumping arises in a variety of ways. Export bounties may be granted by the home country for the specific purpose of encouraging foreign trade; or a monopoly may find it profitable to dispose of a surplus abroad at prices which would be needlessly low in the highly protected home country; or manufactures may avail themselves of the difference between fixed and variable expenses of production to secure some profits over the specific or variable expenses of production by selling abroad at prices which would not be remunerative if applied to their entire output. Moreover, there is good reason to believe that many manufacturers for the export trade make it a practice to sell abroad at unusually low prices whenever they believe that their foreign market is threatened. As was stated above, the custom of "coddling" the export trade seems to be very general.

Now if the reduction of prices were permanent, the country in which the products are dumped would have no real cause for complaint. On the contrary, it might logically regard itself as

the beneficiary of the costly bounties of the other nation. But real dumping is not, and in the nature of things cannot be, permanent. So far as it may be said to have a rational object, it aims to secure foreign markets by selling temporarily at prices which in the long run would not be profitable; and when the market is secured, prices will be raised. So true is this that economists have generally indorsed import taxes and other temperate retaliatory measures designed to abolish dumping. Canada, for instance, has authorized the levy in such cases of a special dumping duty "equal to the difference between the selling price of the article for export and the fair market value thereof for home consumption." A few years ago the beet-sugar industry of France and Germany was so stimulated by bounties that even England, the principal dumping ground of the product, was forced to threaten reprisals in the shape of countervailing import duties. England's resolute attitude, it may be added, led finally to the virtual abolition of sugar bounties at the International Sugar Conference of 1903. In general, there seems to be ample justification for protective duties *that are honestly used* to ward off destructive attacks upon home industries which, if subjected only to legitimate competition, would be able to maintain themselves in the long run. It is evident that we have here returned to the substratum of truth contained in the infant industry and home market arguments.

Dumping has been more productive of arguments against protection than of arguments for protection, in the United States; and the opponents of protection have laid great emphasis upon the fact that many articles of American manufacture are sold abroad more cheaply than at home. That this is a fact is now generally admitted. But the protectionists maintain that most of this can be explained by the rebates allowed to American exporters under our drawback laws. Ex-Secretary of the Treasury Shaw estimates that in 1906, owing to these drawbacks, about $140,000,000 of American manufactures might have been legitimately sold abroad at less than domestic prices.[1]

6. Intimately related to the arguments which we have been considering is the claim that the utilization of labor and capital

[1] Leslie M. Shaw, *Current Issues*, Chap. xxi.

of a free-trade nation is subject to the control, and indeed, one may say, to the whim and caprice of *foreign nations*. Industries differ in their effect upon the physique and character of the people who pursue them. The builder, the skilled engineer, the electrical worker, are benefited intellectually, physically, and morally by their occupations. But the tailor, the maker of ready-made clothing, and the sweat-shop worker are probably harmed rather than elevated by the nature of their employment. Now if foreign nations subsidize by protection and bounty the desirable industries, they may leave to the free-trade nation only those industries which the protected nations do not wish to maintain.

7. Finally, protectionists appeal to the wage-earning classes with the argument that protection *increases wages* by diversifying industry and thus stimulating the demand for labor. Indeed the typical protectionist goes farther than this, and maintains that every American industry is entitled to an amount of protection equal to the difference between the wages which it pays and the wages paid by its most efficient foreign competitor. The latter variety of this argument seems to be plainly absurd, or at least obviously inconsistent with the initial assertion that protection raises wages. For, taken together — and they are frequently advanced in company — they result in this magnificently cumulative plea for ever increasing tariffs: protection raises wages — but high wages put the American manufacturer at a disadvantage in competing with foreign producers — and the home producer must be protected to the extent of the difference in wages — therefore every advance in protective duties laid for the benefit of the wage earner must be accompanied by an additional advance for the benefit of the manufacturer — and so *ad infinitum*.

8. That protective duties should be used to "*equalize costs of production*" here and abroad, has been widely advocated as the modern and scientific basis of protection. It would be hard to find a more unscientific proposal. In the first place it is vague and uncertain. Costs of production are not uniform, either here or in foreign countries. What costs are to be

equalized? — costs to the most efficient producer here and the most efficient producer abroad, or costs to the "typical" producer here and the "typical" producer abroad, or costs to the least efficient producer here and the most efficient producer abroad? In the second place, certain costs, such as rent and even wages, are more or less dependent upon tariff duties themselves, so that the proposal to determine duties by costs merely get us into the vicious circle noted above. Furthermore, there is no logical or natural limit to this process. If we are to equalize costs in the textile and steel industries, why not equalize costs in the production of bananas, coffee, and tea?

As a matter of fact if this program could be carried out it would stop all trade and so wipe out the whole gain from the international division of labor. But fortunately the program cannot be carried out. Economic goods take on a thousand forms. We bar the importation of one variety only to find an equivalent exchange springing up in another variety. This is what we should expect from the theory of international trade, and theoretical expectations are amply confirmed by history and statistics.

Arguments of Free Traders. — In the first place, we may dismiss a number of arguments which are so extreme as to weaken rather than strengthen the cause of free trade.

1. For instance, it is frequently alleged that protective tariffs violate the assumed *natural right* of every man to buy his goods where he will and sell his products wherever he sees fit, untrammeled by human laws. The futility of arguments based upon an assumption of natural rights has been sufficiently exposed elsewhere, and needs no elaboration at this point.

2. It has also been claimed that protective tariffs in the United States are *unconstitutional*, but this argument is idle; it would be most unfortunate and anomalous if nowhere in our country were lodged the power to pass such regulations regarding international commerce as might appear to be required for the promotion of the public welfare. Furthermore, the charge of unconstitutionality does not correspond to the opinion of our

best jurists and there are no decisions of the Supreme Court which in any way tend to support this claim.

3. In a similar vein protectionism has been called *socialism*, but this epithet is so generally applied to whatever a person incompetent to argue a cause does not like that it will scarcely terrify any one.

The really able arguments of free traders are those which aim to show either that protection actually does positive harm, or that it fails to accomplish its ends, or that those ends may be better accomplished without protection.

1. The natural starting point of the free-trade argument, and the goal to which it inevitably returns, is the *theory of comparative costs* laid down on page 362, the proposition that, so long as there are relative, not necessarily absolute, differences in the cost of producing cheaply portable articles in various countries of the world, so long will there be international trade in those articles. Protective tariffs, therefore, merely divert capital and labor from intrinsically more productive to intrinsically less productive industries. To revert to our simile of the lawyer and his stenographer, protection aims to induce the lawyer to write his own letters, on the general grounds that lawyers are more intelligent people than stenographers, and if sufficient encouragement be held out to them they may, in the course of time, be educated up to the point of operating their own typewriting machines better than the stenographers whom they have previously hired.

Temperate advocates of "freer trade" do not contend that this law of comparative costs demonstrates the desirability of complete free trade under all circumstances. They admit that it may occasionally be profitable for a country to pay enormous bounties — this is what protection amounts to — for the development of certain industries. But they do contend that it establishes free trade as the general rule, every departure from which should require the most positive justification. More particularly, they hold, that at the present time, after a century of industrial development that obviates any military necessity for a further diversification of industry, capital and labor should be freely allowed to take themselves to those employments in

which they can reap the largest natural reward, a reward, that is to say, which is not artificially enhanced by subsidies wrung from the general body of consumers.

2. Moreover, it is not clear that protection is necessary to *diversify industry* in a country with such varied natural resources as the United States. The claims of the protectionists at this point may be tested by examining conditions within the wide borders of our own country, within which trade is wholly free. Now, if protection were necessary to foster infant industries and bring them to maturity, the manufacturing industries of this country would still be concentrated in the northern states of the Atlantic seaboard where they first gained a foothold. But they have not been so confined. The early establishment of the textile industries in New England has not prevented their recent development in the South. Indeed, the so-called "center of manufactures" moved steadily west from south-central Pennsylvania in 1850 to central Ohio in 1900; and the increase, at the present time, is much more rapid in the South and West than in the older sections of the country. Internal free trade has not prevented the diversification of industry in the United States, and has not delayed it longer than was desirable. For who shall say that the Dakotas and other typical agricultural states of the Union have greatly suffered from the absence of grimy factory towns?

3. The inevitable spread of manufactures throughout the United States suggests the essential weakness of the *home market argument.* International trade expands just as inevitably as the manufacturing area. It might be desirable to confine domestic producers to the more certain home market, which cannot be destroyed by tariff wars or international complications. But, as a matter of fact, home products will seek foreign markets, and the nation that sells abroad must buy abroad. Since the Civil War we have protected home producers with extremely high tariffs. But in the last thirty years our foreign trade has increased at a rate unequaled by any of the other great commercial countries of the world.[1] Protective tariffs can cripple and

[1] Special Reports of the Census Office, *Manufactures*, 1905, Part i, p. ccc.

harass and distract foreign trade, but they cannot permanently suppress it. No tariff can make the costs of producing all the articles common to commerce precisely proportional in all quarters of the globe.

4. The protectionistic appeal to the *wage earner* seems particularly inconclusive. One reason for distrusting it is the double-faced way in which it is manipulated to suit the particular requirements of time and place. France wants protection in order to protect her low-paid workmen against the greater skill and efficiency of America's highly paid workers. The United States, on the other hand, must have protection in order to shield her highly paid employees from competition with the "pauper labor of Europe." When first used in the United States the argument was that wages were already so high in this country as compared with England, that it was impossible for manufacturers in this country to pay the American rates and continue to compete with English manufacturers. Later, cause and effect, as related in the earlier syllogism, were reversed, and it was asserted that the high wages in this country were due to protection, from which it followed naturally that in order to raise wages higher, still more protection would have to be given.

We cannot arrive at any useful conclusions concerning wages, however, without considering the efficiency of labor and the productivity or favorableness of the environment in which the laborer works. The reason why American labor may receive higher wages and yet have nothing to fear from the competition of less highly paid workmen in Europe is found in the great productivity of American labor (though this greater productivity may depend more upon the natural wealth of this country than upon any innate technical superiority of the American workmen). The average American workman is in no more danger from the goods produced by the "pauper labor" of Europe than the highly paid workman of Montana is threatened by the products of his less remunerated fellow-workmen of New England and the South. Labor competes with labor, not with commodities. Consequently, if it is really desired to protect labor, the logical way would be to place a tax on imported labor, or by other measures

to reduce immigration. If this were done, those who desire labor would be obliged to pay heavily for it, as actually happened in England after the "Black Death" in the fourteenth century had killed off a large part of the laboring population. Indeed, if our tariff makers are sincerely anxious to benefit labor, they should, after rendering labor scarce and dear by restricting immigration, encourage the importation of such commodities as are consumed primarily by wage earners, in order that labor may secure an abundance of them cheaply.

No intelligent free trader would deny that there are now dependent upon protection many industries which pay high wages, nor that the sudden abolition of protection would throw many wage earners out of work. Their contention in the first case is merely that by taxation and by diverting capital and labor into naturally unproductive industries, protection lowers the general level of real wages. Their reply to the second point is that protection affects the industrial organism much as the alcoholic habit affects the human organism. To abandon the habit suddenly would certainly be painful and probably dangerous — but this is sufficient reason neither for increasing the dram nor delaying the gradual abandonment of the habit.

5. Turning to the *fiscal aspects* of the question, the free trader asserts that there is little or nothing to be said in favor of protection. The protective import duty, as compared with the import duty "for revenue only," is a poor tax. It is uncertain and viciously variable, and in the great majority of cases is borne by the home consumer. To the extent that it does not prevent importation it affords no protection; and in so far as it does protect, it yields no revenue to the government. If it raises the price of the article upon which it is levied, however, the increase constitutes a tax upon one class of society — the consumer — for the benefit of another class — the producers of the article. One authority, perhaps the foremost authority, upon the American tariff problem, estimates that the tariff upon sugar imposed by the Payne-Aldrich Act of 1909 resulted in an annual tax upon American consumers of $101,000,000, of which $52,400,000 went into the treasury and $48,600,000 into the hands of sugar producers principally resident in Hawaii, Porto Rico, and Cuba.[1]

[1] Professor F. W. Taussig, in the *Atlantic Monthly*, March, 1908, p. 342.

In answer to this charge that protection involves the taxation of one class for the benefit of another class, it is not sufficient to reply that everybody is free to take advantage of the subsidy and engage in a protected industry. Everybody is not free to establish a rolling mill or a silk factory or a tin-plate plant. Protection means the taxation of the less acute, the less enterprising, the less educated, and the poorer classes in order to create additional commercial opportunities for the abler, wealthier, and better-educated classes, thus reversing the whole spirit of modern taxation which contemplates — so far as it may be done without danger — rather the taxation of the rich for the assistance of the poor than the taxation of the poor for the benefit of the rich. It is not implied, of course, that protection involves class legislation of an unlawful character, nor that taxes are collected from one class and handed over in cold cash to the members of another class. The point turns upon the relative ability of the various social classes to take advantage of artificial opportunities created by the state at enormous expense to all.

6. This brings us naturally to the *ethical criticism* of protection, the charge that by making the temporary prosperity of influential classes dependent upon government bounty, protection encourages those classes to exert a demoralizing pressure upon federal legislation. So great is the stake of private interests in tariff legislation, that systematic lobbying, log rolling, and corruption of the voter follow as inevitable consequences. The beneficiary of the tariff sacrifices his disinterested convictions concerning the general welfare, in order to preserve his own little subsidy from the government. Neither the citizen nor the legislator can vote purely, when his pocketbook is so vitally affected. Even if we admit what is probably true, that protection has resulted in comparatively little direct bribery of legislators, there seems no escape from the conclusion that it creates a kind of interest in legislation which is inherently dangerous and exceedingly difficult to keep within legitimate bounds. The weightier arguments for protection all imply that tariff laws should be scientifically adapted to secure the real national

purposes of protection. The impossibility of getting a "scientific tariff" under the political conditions that protection creates is possibly one of the strongest arguments against protection.

7. Finally, it is alleged that protection *fosters monopoly*. This contention forms the subject matter of a particularly heated dispute, the exact truth of which is difficult to determine. Certain modifications of the more extreme charge, however, are hardly open to question. Protectionists confessedly take it for granted that if foreign competition is shut off or lessened, home producers will still compete. Nevertheless, highly protective duties are still levied, or until the passage of the Underwood tariff were levied, upon the import of commodities whose manufacture in the United States had fallen under the substantial control of monopolies. It is furthermore admitted that such monopolies frequently sell their products at lower prices in foreign countries than in the United States; while it is impossible to deny that — whether the monopoly *was created* by protection or not — the abolition of the duties, by giving foreign producers a chance to compete in this country, would tend to reduce prices, and thus give the American public a valuable ally in their struggle against monopoly. It is not asserted that the tariff has been "the mother of the trusts." Other and more important forces are mainly responsible for the development of the trust. But protective tariffs have unquestionably deprived the American people of a strong weapon against the trusts.

Some General Considerations. — Before attempting to sum up the preceding arguments and strike a practical working balance, it is necessary to call attention to certain general considerations which have not figured in the foregoing "starched procession" of *pros* and *cons*. In the first place, it is necessary to remember that the federal government must secure a large revenue from tariff duties, and that in consequence the question which we are discussing is not one of protection *versus* free trade, but of protection *versus* freer trade. In the second place, the economic importance of the whole controversy has unquestionably been exaggerated. We find a country like England

prosperous under free trade; we find countries like France and the United States prosperous under protection. It is of real but not of vital importance. Our internal trade vastly exceeds our foreign trade in every way. The domestic trade of the Mississippi Valley alone is far greater than our entire foreign commerce. In the third place, the American tariff is a historical growth, and, bad as it may be in many respects, it has taken deep root. During the last century it has become part of our life, and cannot be suddenly eradicated with impunity. If it is true that American labor would be better off without it, it does not follow that it ought to be removed suddenly in the interests of American labor. If the industrial growth is abnormal, it is none the less true that adjustment to normal conditions is a painful process and should be conducted cautiously. Displacements of labor and capital cause suffering and loss, and it is clear that any reform of the tariff must be conservative and careful, a movement toward freer trade, not the sudden withdrawal of protection.

Conclusions. — Most of the arguments enumerated above, both for and against protection, contain a measure of truth. Historically, protection was inevitable in the United States, and, in the early period of the country's development, beneficial. During the three great wars which seriously threatened the stability of this country, many new industries sprang up which, upon the cessation of war and the resumption of internal trade, were seriously threatened by foreign competition. Many of these industries were so suited to our soil and our people that only a short period of protection was needed to make them self-supporting. Under the circumstances it would have been unwise to permit the sacrifice of the capital invested in these industries; and whether it would have been unwise or not, human nature is such that the desired protection was sure to be granted. In short, there is a large measure of real truth in the infant industry argument.

Circumstances, however, have radically changed in the last few decades. Our *quondam* infant industries have, for the most part, attained a very vigorous maturity, and in some instances

have become belligerent and prone to monopolistic bullying; our manufactures have become sufficiently diversified to remove all danger of industrial collapse in time of war; and, above all, we are rapidly entering the economic stage in which, according to the ablest exponent of protection that economic science has ever known, — Friedrich List, — protection is a hindrance rather than a help. That is to say, we are rapidly building up an extensive export trade in manufactured articles; year by year raw materials constitute a larger proportion of our imports and a smaller proportion of our exports; and we have already become the greatest exporting country of the world. All this means that in the near future our manufacturers themselves will look with kindlier eyes upon the withdrawal of the protection they do not need, which in fact actually increases the cost of some of their raw materials, and incites foreign governments to retaliatory taxation upon goods imported from the United States. Our growing export trade will itself bring a wider appreciation of those fundamental principles which have led economists, with but few exceptions, to condemn protection as a permanent policy applicable to all stages of economic development.

QUESTIONS

1. Distinguish what you believe to be the sound from what you believe to be the fallacious reasons for protection, briefly stating your reasons.

2. Why is a home market believed to be superior to a foreign market? Does this apply in all cases?

3. Explain the argument against dumping. Is dumping more or less prevalent than it used to be?

4. Explain how one country may influence the selection of industries in another country. Is this argument sound? What are the limits of its truth?

5. Can a protective tariff increase money wages? real wages? Explain.

6. State the reasons for, as well as those against, the proposal to use tariff duties for the purpose of equalizing costs of production here and abroad.

7. Distinguish what you believe to be the sound, from what you believe to be the fallacious, arguments for free trade, briefly stating reasons.

8. What is the difference between a "tariff for revenue" and a protective tariff? Do protective duties make good taxes? Explain.

9. What effect has protection on legislation? What machinery is proposed to remedy this evil?

10. Explain the connection, if any, between high tariffs and monopoly.

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PART III

DISTRIBUTION

CHAPTER XIX

DISTRIBUTION AS AN ECONOMIC PROBLEM

It has already been remarked that the production and the distribution of the annual income of society cannot be sharply separated, and more or less has already been said about the four parts into which the total social income is usually divided; namely, wages, interest, rent, and profits. The greater part of distribution might undoubtedly be considered under the general heading "Production," but, on the other hand, it is frequently asserted that distribution is "the true center of all economic inquiries," and it would be possible to treat nearly the whole of production from the standpoint of distribution. The truth is that these old traditional divisions of our subject matter indicate different points of view, and on this account it seems desirable to retain them. When we pass from production to distribution, we do not enter an entirely new field, but we look at an old field of investigation from a new point of view.

The center of interest in the practical applications of economic principles has shifted from production to distribution. The mercantilistic writers of the seventeenth and eighteenth centuries were primarily interested in the most efficient ways of increasing the sum total of a nation's wealth. Even Adam Smith, as the title of his great work, *An Inquiry into the Nature and Causes of the Wealth of Nations*, indicates, had chiefly in mind the same problem, although he emphasized the fact that the real well-being of a nation consists in the well-being of the great body of its people. During the past century the production of

wealth has increased beyond all precedent, the chief factors contributing to this result being the factory system, the exploitation of vast natural resources (made possible only by modern methods of transportation), and the free scope given to the initiative of the individual business man. Yet poverty still exists, and its harsh features are thrown into sharper relief by contrast with the fact that the present production of wealth *per capita* is indisputably the highest that the world has ever known. Moreover, while the social discontent arising from inequalities in the distribution of wealth is a very old thing, it is only in modern times that democracy has given it an adequate opportunity for formulated, organized expression. A large share of the economic problems which are felt to press upon society today for solution relate directly or indirectly to the distribution of wealth.

It should be noted, however, that we have to discuss under the name " distribution " two different processes. The first and inclusive meaning of the term is the distribution of the wealth or income of society *among individuals and families;* in other words, the question of individual fortunes, poverty, and wealth. The second kind of distribution is the apportionment of the product *to the different factors of production.* This is not a question of wealth *versus* poverty, but of wages *versus* interest, profits, and rent. Of course, this kind of distribution affects the personal distribution of wealth, but it is by no means the same question. To explain why lots in New York City command high rents is one thing; to explain why a large amount of these rents goes to the Astor family is another thing. In the case of wages, however, the two kinds of distribution amount to about the same thing. There is another sense in which the word is *not* used in this chapter. We do not mean by distribution the moving of goods from the place where they are produced to the place where they are consumed. When we speak of railways or merchants as " distributive agencies," we are using the term " distribution " in a sense very different from that of the technical economic term " distribution." Distribution is a question of ownership, not a question of the location of goods.

Distribution controlled by Existing Institutions. — The statement that distribution is a matter of ownership suggests at once the relation of private property to distribution. Individual wealth is, fundamentally, a sum of property rights. Every extension of property rights by society, as, for example, in permitting the private ownership of the rights to supply cities with water, electricity, or transportation facilities, extends the field of private gain and correspondingly affects the distribution of wealth. The income received by the successful manager of a municipal waterworks plant is undoubtedly a very different thing from the income the same individual would receive if he were the owner of a franchise permitting him to conduct the business of supplying the city with water as a private undertaking. The policy of leasing, rather than selling, public lands, which has been adopted by some of the newer American states, is bound to have an appreciable, even if not a very important, effect upon the distribution of wealth.

In the institution of inheritance we have an instrument which once in a generation redistributes the property rights in existing wealth. It is not strange that those who wish to limit or retard the growth of large individual fortunes have looked to the control and especially to the taxation of inheritances as a means to this end. Doubtless the prevalence of large landed estates in England is closely connected with the English law of primogeniture, just as the predominance of small holdings in France is in part due to the French law forbidding the disinheritance of any of one's children.

Personal freedom, as a legally guaranteed institution, is also of fundamental importance. The factors determining the income of the free workingman are very different from those determining the portion of the slave. It should be remembered, too, that the actual processes by which wealth is distributed are today largely controlled by the institution of contract. What rent, wages, or interest one gives or receives is no longer fixed mainly by custom, as in the Middle Ages, but is a matter of agreement between individuals. So far as society limits the right of contract, as in the case of legislation regulating the employment of women and children, it correspondingly affects the distribution of wealth.

These fundamental institutions are discussed more fully elsewhere in this treatise. They are mentioned in this connection in order to emphasize more definitely the fact that the distribution of wealth takes place under the conditions imposed by the existing social order. Even the most radical advocates of greater equality in the distribution of wealth do not propose an arbitrary leveling down of fortunes. They direct their attacks against one or more of these fundamental institutions, such as inheritance, private property in land, or private property in production goods. Then there are many persons who are willing to accept the conditions imposed by the existing social order, as a field for the operation of *competitive* forces in wealth distribution, but who object to monopoly and special privilege. This suggests that the forces bringing about distribution on the basis of the existing social order

are in themselves amenable to social control. If those who secure the chief prizes in the economic struggle may plume themselves on the fact that they are the victors in a game that is open to all, it is none the less true that society lays down the rules of the game.

A large part of the complex of institutions and regulations through which society controls distribution work smoothly and silently, their action, so far as society at large is concerned, being unconscious. It is only when obvious conflicts arise between some of the effects of this unconscious control on the one hand and present-day ideals of social welfare on the other hand, that the significance of any part of this fundamental institutional control becomes generally felt. It is not the least of the merits of the study of economics that it emphasizes the fundamental character of that part of the social control of wealth production and wealth distribution which lies below the horizon of social consciousness.

Money Incomes. — If each family produced all that it consumed, as most families still do in part, there would be no problem of distribution, except whatever problems might arise respecting the factors determining the amount produced by each family. But since most men today are working in more or less specialized employments, and for money incomes, the fact is, as was suggested in a previous chapter, that distribution takes place through a process of price-fixing. Some men (manufacturers, merchants, farmers) make a money income by selling goods for more than it costs them to produce them or to buy them from others, while other men (laborers, salaried employees, professional men, capitalists, landowners) get a money income by selling their services or by selling the use of their capital or land. In the first case, the money income takes the form of profits; in the second case, it is wages, interest, or rent, as the case may be.

A man's real income consists of the commodities and services that satisfy his wants; and the extent to which his money income can be transmuted into real income depends on the prices of these things. One always has the option, of course, of investing part of his money income in production goods rather than in consumption goods, thus giving up part of his present real income for a larger future income. However, since different men have to pay about the same prices for the same kinds of goods, a discussion of the factors determining money incomes

will be, *ipso facto*, a discussion of the factors determining real incomes, except as it is found that certain kinds of incomes are changed more readily to meet the conditions imposed by changes in prices than are other kinds of income.

It is obvious that one person may be the recipient of more than one kind of income. The American farmer who owns the land, buildings, farm machinery, and live stock that make up his productive equipment, and who does part of his own work, is at the same time entrepreneur, landlord, capitalist, and laborer; and his income is made up of different proportions of profits, rent, interest, and wages. The net income of a tenant farmer, utilizing only borrowed capital, and employing only hired labor, would, on the other hand, consist entirely of profits. The economic analysis that seeks to determine the rules governing the apportionment of the annual dividend under the categories of profits, wages, rent, and interest, bears only indirectly upon the question of the personal distribution of wealth. The income that any individual receives depends primarily upon his efficiency and success as a wage earner or as an entrepreneur, or upon the amount and the income-yielding capacity of the capital and land which he owns. His ownership of capital and land may have come about through the thrifty husbanding of portions of his income in previous years, or it may have come about through gifts or inheritance.

The Law of Diminishing Productivity. — To explain the prices paid for personal services is to explain wages; to explain the prices paid for the use of land and capital is to explain rent and interest. Certain special and distinguishing characteristics enter into the determination of each of these three classes of prices. The conditions governing the supply of labor are, for example, very different from the conditions governing the supply of land. Yet there are some fundamental facts that are common to all three classes of prices. The most important of these common factors is the *law of diminishing productivity*.

Assume as an illustration that a certain farm is cultivated by a farmer who uses only his own labor, together with a small amount of capital in the form of draft animals and agricultural imple-

ments. Let us assume further that his land is devoted exclusively to the growing of one crop, — corn, for instance. His money income will depend on the amount of corn he can produce and the prices he can get for it. At given prices he can increase his income only by increasing his product.

But his product may be increased by the use of any one of a number of different methods. In the first place, he can hire a farm laborer to assist him. The two men, working together, will undoubtedly be able to get a larger product from the farm than one man could. In some cases they may be able to get double, or even, through the advantages of coöperation, more than double, what the farmer could produce working alone. More often, perhaps, the employment of the second man will not double the total product. However that may be, it is absolutely certain that if the farmer employs a third, a fourth, or even more men, he will sooner or later reach a point where it will be found that the employment of the last man has not increased the product as much as it was increased by the last previous laborer. That is, the addition of the third man may not have increased the product as much as the employment of the second man did, or the fourth man may not have increased the product as much as the third man did.

This point is called *the point of diminishing productivity*,[1] for after this point is once reached it will be found that, save under the most exceptional conditions, each successive additional laborer will increase the aggregate product by an amount less than the last previous laborer added to it. This is not because of any differences in the laborers, whom we assume to be of equal efficiency. It means simply that as the productive possibilities of the farm with its equipment of capital become more fully exploited through more careful tillage, it requires increasingly greater efforts, in the form of still more careful and thorough tillage, to increase the product by a given amount.

[1] In some economic writings what is here called "diminishing productivity" is termed "diminishing returns." It seems preferable to reserve the latter term for its more familiar application to the phenomenon of the increasing expenses incurred in enlarging the total agricultural product under the pressure of a population growing in numbers or in wealth.

This is a fact of such common observation that it needs no statistical proof; although various agricultural experiment stations have made records of the effect of different degrees of thoroughness of cultivation upon the yield of different crops.

The Marginal Product of Labor. — One might imagine, at first thought, that after the point of diminishing productivity had been reached, it would not pay the farmer to hire additional laborers. But the only question that directly concerns the farmer in this connection is whether an additional laborer will "earn his wages," — that is, *whether the added product will sell for enough to cover the additional expense incurred for wages.* It will pay the farmer to extend his employment of labor up to the point where the addition of another laborer to the working force would increase the product by an amount too small to sell for enough to pay the wages of the laborer, and where the deduction of a laborer from the working force would decrease the product by an amount at least sufficient to pay the wages of the laborer. If the farmer stops short of this point, he is not making all the possible profits; if he goes beyond it, he is cutting down his profits by employing labor which does not "earn its wage." The last laborer employed (not necessarily any particular laborer, nor the last in point of time, but merely any one laborer of the *total number employed*) is the *marginal laborer*, and the increase in the total product attributable to the marginal laborer (the part which would be lost if one less laborer were employed) is the *marginal product of labor.* If the farmer has estimated product and prices accurately, it will be found, of course, that the money value of the marginal product of labor will be approximately equal to the wages of the marginal laborer. Or, since the laborers are supposed to be of equal efficiency, and hence to receive uniform wages, the statement may be put in the broader and more significant form that *wages and the marginal product of labor will tend to equal each other.*

The diagrams illustrate the principle of the diminishing productivity of labor, developed in the foregoing analysis. In Figure 1 the rectangle OM represents the amount of corn that the farmer could raise on his land if working alone, with his given equipment of capital. The rectangle AN represents

the increase in the product effected by the addition of another worker. Similarly, *BP*, *CQ*, *DR*, and *ES* represent respectively the additions to the product

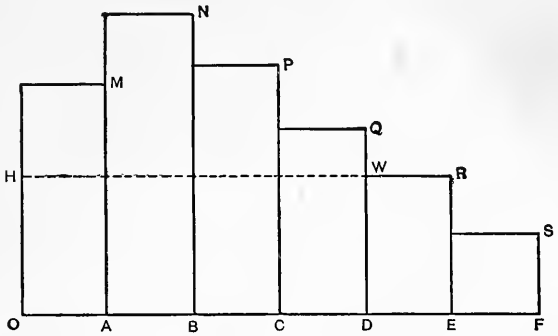

FIG. 1

resulting from the employment of a third, fourth, fifth, and sixth laborer. If *DR* bushels of corn — the increment in the product attributable to the fifth laborer — sells for about enough to pay the wages of one laborer, the farmer will refuse to employ the sixth laborer, while the employment of the fifth would be a matter of indifference. If the fifth laborer were employed, the proceeds of the sale of that part of the total product represented by the rectangle *OERH* would be used up in the payment of wages (including payment for the farmer's own work as a laborer), while the part of the product represented by the small rectangles above the line *HW* would be left to recompense the farmer for the use of his land, for the interest on and wear and tear of his capital. If any surplus is left after these demands are satisfied, it would, of course, constitute the farmer's profits. If the conditions were as assumed, the fifth laborer would be the marginal laborer, and the product represented by the rectangle *DR* would be the marginal product of labor.

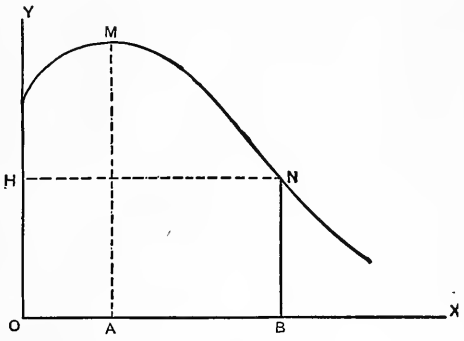

FIG. 2

If we were dealing with a very large undertaking, in which many laborers are employed, the successive rectangles representing the increments in the

product attributed to the hypothetical addition of successive laborers could be conceived as indefinitely narrow, so that the graphic representation would take the form represented in Figure 2, where the line *AM* is located at the point of diminishing productivity, and where the line *BN* represents the marginal product of labor. In this case the rectangle *OBHN* represents the part of the total product which will just suffice to pay the wages of all the laborers employed.

The Marginal Products of Capital and Land. — Thus far we have supposed that the farmer is content to get along with his original amount of land and capital, and to increase his product by means of an increased use of labor. Other possibilities are, of course, open to him. It might happen that he would be content to do without additional laborers, using instead an increased equipment of capital. By purchasing more draft animals, more labor-saving machinery, improved fertilizers, or possibly by installing drains or irrigation ditches, as the case may be, he may be able to raise considerably more corn than he could without such investments. But here, again, he will find the possibility of increasing his product subject to the same limitations that would have prevailed had he increased his labor force. With a team of horses he will be able to accomplish more than he could with one horse; two teams of horses may still further increase the total product of the farm; a third would probably be of very little advantage, and a fourth team still less useful. So with investments of capital in other forms: the law of diminishing productivity is a remorseless physical fact which the farmer has to reckon with.

The concrete form in which the problem presents itself to him is this: Will a further investment of money in a specific kind of capital goods pay me? Here the farmer has to make on the one hand the best estimate he can of the amount which the proposed capital goods will add to his annual product, and of the probable selling value of the increased product. On the other hand, he has to count his increased annual expenses. These will include (1) the original cost of the additional equipment, divided into annual costs according to its probable durability (each year's costs being properly only the wear and tear,

or "depreciation" attributable to that year's use); (2) the maintenance or upkeep (including such things as ordinary repairs on machinery and the cost of feeding horses), and (3) the interest on the investment (what the farmer has to pay if he borrows the necessary funds from some one else, or what he might have lent his money for to some one else if he uses his own funds). Guided by these estimates, the farmer will naturally increase his equipment of capital goods so far as the returns from the added product would more than suffice to cover his increased costs. Beyond this point he could not wisely go. The last increment of capital — which just suffices to pay for itself — is the *marginal increment of capital*, and the added product attributable to it is the *marginal product of capital.*

The diagrams portraying the operation of the law of the diminishing productivity of labor will serve as well to illustrate the diminishing productivity of capital. Assuming that the amount of land and the amount of labor to be utilized are definite in quantity, the successive rectangles in Figure 1 represent the increase in the gross product attributable to each of successive increments of capital. Figure 2 represents the same conditions, except that each increment of capital is assumed to be indefinitely small.

If (in Figure 2) *BN* represents the marginal product of capital, the whole return imputed to capital is, of course, represented by the rectangle *OBNH*. The area above the line *HN* represents the part of the product which is available for rent and wages, the farmer's profits being derived from any surplus that is left after these demands are satisfied.

There is one difficulty in the foregoing analysis, however, that may have been noted by the reader. What is meant by an "increment of capital"? In the case of labor the "increment of labor" can be interpreted as the labor of one man (for any definite period of time that may be chosen), the one man being assumed (for the purpose of simplicity in the analysis) to be of equal efficiency with all others constituting the labor supply. It is just as practicable, of course, to assume that one horse is, for the farmer's purposes, just as efficient as another horse, that only one kind of plow is available, and that one bushel of fertilizer is exactly like any other bushel of fertilizer; but this does not help us out of our difficulty. For how can we blend horses, plows, and fertilizers into one concept, and divide them into "increments of capital"? One way of getting around the difficulty is to think of the capital which the farmer combines with his labor and his land in terms of its money value. In this sense an increment of capital might be a dollar's worth of capital, or ten dollars' worth of capital, without reference to the different kinds of concrete production goods really composing it. This device is useful for some pur-

poses, but it obscures the fundamental fact that capital gets its value from its ability to secure an income for its owner. The purpose of this analysis of diminishing productivity is to open the way for a discussion of the prices paid for the services of land, labor, and capital. To use the term "capital" in the sense of capital value at this stage in the discussion would only lead us into circular argument. This point cannot be further elaborated here, but should be kept in mind by the reader in connection with the discussion of interest in a subsequent chapter. As a matter of fact *the law of diminishing productivity holds for each specific kind of capital* the farmer uses. For example, imagine that the farmer is limited to the use of a fixed amount of all forms of capital except one, — horses, for instance. Then the successive rectangles in Figure 1 would represent very well the increments of product gained by the use of additional horses, while if the product added by the use of a fifth horse is just about enough to pay for the increased expense, the rectangle *DR* would represent the marginal product. The illustration can, by a similar process, be made to apply to any other kind of capital. The farmer will normally make use of *each specific kind* of capital up to the marginal point. The same is true for each specific kind of labor or each specific use of labor. The use of the tripartite classification of the factors in production in explaining the principle of diminishing productivity is merely a matter of convenience.

A third way of increasing his product is also open to the farmer. He may think it wiser to get along with his original equipment of capital and his own labor, and to increase his product by utilizing more land. The adoption of this procedure would mean a less intensive cultivation per acre of land. The use of labor and capital would have to be distributed more thinly over the larger acreage. This would result in a smaller product *per acre*, but the procedure would be warranted if the increase in the annual product should sell for more than the annual cost of the additional acreage. By the annual cost of additional land we mean the rent which the farmer has to pay for the land if he leases it, or the interest on the amount of the purchase price, if he buys it. It is obvious, however, that the combination of more and more land with a fixed amount of labor and capital will result in a smaller and smaller return per acre of land, and that a point will soon be reached beyond which it will not pay the farmer to go. In other words, the law of diminishing productivity rules when land is considered as the variable factor, just as it does when labor or capital is considered as the variable.

The diagrams already used may be adapted to the illustration of the present hypothesis by assuming that equal areas, if successively combined with a given amount of labor and capital, would yield increments of product as represented by the successive rectangles in Figure 1, or by the curve in Figure 2. It is assumed for the sake of simplicity in the illustration that the different acres of land available for the farmer's use are of equal fertility.

The Actual Operation of Diminishing Productivity. — It has been assumed thus far that the farmer of our illustration has to be content with a fixed quantity of two of the three factors in production, but that he is at liberty to increase his use of the third factor up to the point where maximum profits will be gained for himself. Assuming in turn that each of the three factors in production was the variable one, we found that in each case the law was the same — the most advantageous adjustment was reached when the product added by the last increment of the variable factor would sell for just enough [1] to cover the increased expense.

In one way, however, this assumption does not correspond with the facts. The farmer is at liberty to increase his product by increasing his utilization, not only of any one, but of any two, or all of the three, factors of production. He may, for example, purchase more draft animals and more machinery, employ more labor, and at the same time acquire more land. To a certain extent the use of one factor may lessen the use of another (as in the case of labor-saving machinery and labor). More often, however, the reverse is true. The acquisition of machinery may necessitate the use of more horses, while the acquisition of more land will often make profitable the use of more labor as well as more capital — a fact which is itself implied in the law of diminishing productivity. Although the employment of labor, capital, and land can thus be increased simultaneously, the significance of the law of diminishing productivity is in no wise diminished. The farmer, in deciding upon the purchase of a particular kind of capital good, has to

[1] Whether this last unit, which just pays for itself, will be added, is of course a matter of indifference. The margin is consequently sometimes called the "margin of indifference."

take into account his present and, to some extent, even his probable future supply of other kinds of capital goods, as well as of land and labor, before he can form a judgment as to the amount which the use of the particular capital good will add to his annual product. Moreover, he has to choose between additional investments in labor as against additional investments in land, or additional investments in different kinds of capital. But his effort to get maximum profits will lead him to make those investments which promise to result in the greatest additions to his product. The result of this will be, normally, that each factor in production will be utilized up to the marginal point — the point where further utilization would add a product so small as to sell for less than the increased expenses.

It is not only in agriculture that the law of diminishing productivity is the fundamental thing in determining the proportions in which the factors of production are combined. Every manufacturer has the option of using either relatively more machinery and relatively less labor, or relatively less machinery and relatively more labor in order to produce a certain quantity of goods. He may have to decide, also, between building a six-story factory covering an acre of ground, and a one-story factory covering six acres of ground — a problem which is paralleled by the farmer's problem of deciding between the cultivation of a relatively large acreage and the more intensive cultivation of a smaller acreage. The entrepreneur in every kind of undertaking has to decide as to the advisability of a particular investment in land, capital, or labor, with reference to the fundamental question, "Will it pay?" And the profitableness of any such investment is always a matter of the cost of the unit of land, labor, or capital, as compared with the selling value of the quantity which it will add to the entrepreneur's total product.

In order to achieve maximum profits, each entrepreneur will endeavor, so far as is practicable, to apportion his use of land, labor, and capital so that the value of the increment of product attributable to the marginal unit of each class of productive agents will about equal its expense.

The significance of the law of diminishing productivity in rela-

tion to the distribution of wealth now becomes apparent. If a given class of laborers in a given employment receive like wages, their wages (being the same as the wages of the marginal laborer) will tend to equal the marginal product of labor. The expense incurred by the entrepreneur for any unit of a certain kind of capital goods will tend to equal the value of the marginal product of that particular kind of capital goods. The rent which the farmer will pay for any acre of a quantity of land of uniform quality will tend to equal the value of the marginal product of land of that quality. But so far as competition works freely, different entrepreneurs in the same market will have to pay the same wages for the same kind of labor, the same price for the same kind of capital goods, and the same rent for the same kind of land; and they will get the same prices for the same kinds of products. Moreover *any one unit* of the aggregate amount of a productive agent of any one kind employed at any one time may be deemed to be the marginal unit. So it is possible to state in more general terms that the money remuneration of each specific unit of the agents of production in production tends to equal the selling value of the amount of product *dependent upon* the use of that unit.

It is not necessary for the validity of this specific productivity theory of distribution, as it is called, that in any particular undertaking at any given time the proportions in which the factors of production are actually combined should be adjusted with the nicety which the theory seems to imply. The amount of land which the farmer holds at any one time is apt to be fixed by his estimate of his future rather than of his present production, while custom, pride of ownership, and the chance of gain through an increase in land values (which is not to be confused with the motives guiding his activity as a producer) have their influence. Moreover, the size of the government homesteads into which a large part of the public domain was divided has had an important effect on the size of the farmer's holding in a large section of the United States. The average American farmer undoubtedly holds more land than he would if he were looking for maximum present profits. The practical problem

for him is apt to be how intensively he shall cultivate it: how much labor and capital he shall combine with it. That is, he is apt to use relatively more land and relatively less labor and capital than he would use if every additional acre of land used meant an additional expense for land. This conclusion is not altered by the fact that his land is probably not of uniform quality, and that some of it may not repay cultivation under present conditions. In a similar way the manufacturer builds his factory for the future, and may even equip it with a larger complement of some kinds of machines (such as boilers and engines) than present requirements justify. On the other hand, a sudden and probably temporary increase in demand for a product will be met by the manufacturers by the employment of more labor (even at the high rate paid for overtime or night work) rather than by the installation of more labor-saving machinery, even though the latter might, in the long run, be more economical. In general, when considerations which take into account a period of years dominate, land and the more permanent forms of capital goods will be used more freely, labor and the less permanent forms of capital goods less freely. When short-time considerations are dominant, the reverse will be true.

These limitations do not invalidate the law of the equality of the remuneration of the agents in production and the prices of their specific products any more than the fact that a feather does not fall through the atmosphere as rapidly as a stone invalidates the law of gravitation. This law, like other economic laws, is the statement of a fundamental tendency, which, in this case, is bound up with the universal desire of entrepreneurs to get for themselves the largest possible profits.

Marginal Productivity and the Prices of Production Goods. — The reader who has firmly grasped the concept of marginal utility will find that a recognition of some similarities in the rôles which marginal utility and marginal productivity play in the price process will help him to grasp the significance of the latter concept. The prices paid for specific units of consumption goods depend upon their relative capacity to yield an "in-

come of satisfactions"; the prices that will be paid for production goods depend upon their capacity to yield a money income to the entrepreneur. In the one case the law of diminishing utility is dominant; in the other case, the law of diminishing productivity. Just as we cannot speak of the utility of a commodity in general, but only of the utility of particular concrete units of a commodity, so we cannot speak of the productivity of land, labor, or capital in general, but only of the productivity of particular concrete units of land, labor, and capital. The consumer is getting the maximum of satisfaction of his wants when the final dollar spent for one commodity satisfies just as intense wants as the final dollar spent for any other commodity, and he apportions his expenditures accordingly. The entrepreneur is not making maximum gains if his final expenditure for any one kind of productive agent adds more to his product than his final expenditure (of equal amount) for any other productive agent, and he tends to apportion his employment of land and of different classes of labor and capital accordingly. But it must not be supposed that the statement that the prices paid for land, labor, and capital tend to equal the value of their marginal products is a complete explanation of the valuation of the services of the factors in production any more than the principle of marginal utility is a complete explanation of the valuation of consumption goods. In fact, from one point of view, marginal productivity itself depends upon the prices which the entrepreneur has to pay for the services of the factors in production. The prices of productive services are like the prices of vendible commodities in that each buyer (entrepreneur) and each seller (laborer, capitalist, landlord) has to buy and sell at prices which, being established by the aggregate demand and supply of the market, are beyond his own control. Yet this aggregate demand and supply is the net result of the decisions made by individual buyers and sellers with respect to the amounts which they will buy or sell at one price or another.

The demand for the use of land, labor, and capital is ultimately a demand for their products — the goods that satisfy human wants. The entrepreneur's task is to anticipate and

meet this demand — a problem that takes the concrete form of producing goods that will sell for more than the expense of production. On the one hand he has to estimate the quantities which he can sell at certain prices; on the other hand, he has to take account of the quantities which various units of land, labor, and capital will contribute to his product, together with the prices (rent, wages, cost of capital goods, and interest) that he has to pay for these units. Through his mediation the demand of society for want-satisfying goods becomes a demand for the services of certain quantities of land, labor, and capital, combined in certain proportions. And the principle that guides the entrepreneur's transformation of the community's demand for the products of land, labor, and capital into his own demand for the services of these factors in production is the principle of marginal productivity. The wages, rent, and interest that are actually paid for the services of the factors in production are the resultants of the demand of entrepreneurs, on the one hand, and of the supply of these factors on the other hand. The forces determining these prices are *focused* at the margin.

The principle of marginal productivity is an illuminating way of stating the problem of the distribution of wealth, rather than a solution of it. Just how supply and demand operate in the case of each factor in production is a topic to be considered in later chapters. Just as utility is at the same time the cause and effect of price, so marginal productivity is at the same time the cause and effect of wages, rent, and interest. From one point of view it is seen that the competition of producers makes it necessary that specific units of land, labor, and capital should get a reward proportionate to the selling price of the amounts which they contribute to the social dividend; from another point of view it is equally clear that the necessary expenditures for land, labor, and capital are, in the long run, potent factors in determining the prices of the things that make up the social dividend.

The Meaning of "Productivity." — Furthermore, we should not forget that the word "productivity" as used in economics (and generally in current discussions of economic topics) has a

distinctly limited meaning. To digress for a moment in order to make the point clearer: In the theory of consumption we emphasize the fact that many of the most important human wants are satisfied by "free goods," which, simply because they are free, lie outside the proper field of economic investigation. But the enjoyment of these free goods is usually dependent upon the possession of economic goods. Air is a free good, — to any one who can demand the economic goods necessary to life. The glorious scenery of our national parks is a free good, — to any one who can afford traveling expenses and hotel bills. In general, the enjoyment of many of the finer pleasures of life, involved in the common human relations of an individual to his physical and social environment, are "free," but free only to the individual who can afford the leisure and the economic goods without which many of these "free" pleasures are impossible.

For present purposes, however, the important point is that there are *free production goods* as well as free consumption goods. Nature furnishes some of these. The oceans and lakes furnish free pathways for commerce; natural forces of all kinds are freely utilized by men in the work of production. But we do not call these things productive, *because no part of the annual product is dependent on the utilization of any particular unit of them.* In this technical sense the wind is not productive, but windmills are. In order to utilize the ocean we have to invest money in vessels and docks. We have to impute productivity to these things because they will not be furnished unless it is estimated that they will yield a remunerative income, and because the annual product will obviously be reduced if they are not furnished. Much has been written about the "productivity" of the Panama Canal. But we would have to impute productivity to the Strait of Gibraltar if England were able to charge a toll for its use!

Somewhat analogous to these "free productive goods" is society's fund of accumulated knowledge of productive methods, — the heritage of centuries of economic evolution. This accumulated industrial experience is an infinitely more precious

possession than the existing store of productive goods. Compare the productive possibilities of a community of men possessing this knowledge, but forced to begin work absolutely without a ready-made stock of capital goods, with those of a tribe of savages suddenly and miraculously equipped with all the productive appliances of modern civilization. Yet this vast fund of productive knowledge, so far as it is common property, is not thought of as "productive." The social dividend is continually being increased as a result of the discovery of new natural forces, or new ways of harnessing and utilizing natural forces. Secrecy or government patents make it possible for those who first introduce these new methods of production to reap an income from the temporary advantage it gives to them as producers. For the time being these new methods themselves have to be regarded as "productive," although they contribute much more to the increase of the social dividend after they have become matters of common knowledge and use, and hence have ceased to be called "productive." Disinterested scientists, especially those in the employment of the government or of universities, have often given the results of their improvements in industrial methods freely to the world, thereby swelling the social dividend, but not reaping for themselves the pecuniary reward which goes to those who patent their improvements and thereby render them "productive." Moreover, many of the world's greatest advances in the technique of production have been made possible only by the patient researches of investigators in the "unproductive" field of pure science, working solely for love of the work, and without hope of pecuniary reward.[1]

We impute productivity only to goods or services which are the objects of property rights or of analogous rights of control, — such as a man's power to dispose of his own labor. The fact is that just as the benefits of free consumption goods are bound up with the possession of larger or smaller quantities of economic goods, so the utilization of free productive agencies is possible only in

[1] See a note on this point in Merz, *History of European Thought in the Nineteenth Century*, Vol. i, p. 92, note. The list there given could be greatly extended.

combination with labor, waiting, and scarce and appropriable natural objects, — and these have to be paid for. We harness natural forces for the work of production, but we impute productivity only to the harness. We continually learn better and better methods of doing our productive work, but we impute productivity only to the expenses involved in utilizing these methods, — not to the methods themselves. Productivity implies merely a relation of *dependency* between the amount of the product and the use of a *particular unit* of one of the agents in production.

It is important that the reader should see the truth in the statement that the laborer, the landlord, and the capitalist get paid in proportion to their respective products. It is equally important that he should see clearly that there are definite limitations to the meaning and significance of the statement.

The statement that rewards tend to equal products has no ethical significance, and should not be interpreted as a justification of the present economic order, — and this for the following reasons among others: (1) That distribution ought to be according to productivity is itself a debatable proposition. Some socialists, for example, maintain that distribution according to needs is a higher ideal. (2) The ethical side of the problem of distribution relates to personal distribution, while the marginal productivity doctrine relates to the determination of the incomes going to the different agents in production. To state that the rent of an acre of land tends to equal the value of its product is not to say that the landowner has "earned" his income. The private receipt of rent depends upon such social institutions as private property and inheritance, and these have to be judged from the broad point of view of social welfare. (3) The efficiency of the individual laborer, which is one of the things determining his productivity, often depends upon the opportunity he has had to "make the most of himself." But opportunity depends largely on environment, and this in turn is to a large extent amenable to social control. (4) The amount of the marginal product of any one factor in production is itself a resultant of all the forces affecting the supply of all the factors in production and of all the conditions that affect their fitness to serve in the production of the things that consumers are demanding. (5) This theory is only a statement of a normal tendency. It does not, properly understood, conflict with the fact that such things as custom and other forms of economic friction and inertia, the higgling of the market, the conscious efforts of social classes to better their condition, imperfections in the monetary system, short-sighted selfishness on the one hand, altruism on the other, as well as the conscious social control expressed

in labor legislation, usury laws, and the like, all have important effects upon the incomes actually received by those who furnish labor, capital, and land for the work of production. Actual wages may differ from the normal wages measured by marginal product just as contractual rent may differ from economic rent. (6) We can imagine an economic order very different from the present one in which it would still be true that incomes would tend to equal products. If, for example, wages were arbitrarily increased 50 per cent by law, while one result would undoubtedly be an increase in unemployment, it would still be true that wages would tend to equal the marginal product of labor, or, rather, that the marginal product of labor would tend to equal wages. To attempt to avoid this difficulty by assuming that the present order, or a purely competitive order, is the "natural" order of things, is to beg the whole question in favor of the existing status.

Social Aspects of Diminishing Productivity. — Since the entrepreneurs are only the intermediaries between society viewed as a body of consumers and society viewed as a body of producers, we may, for present purposes, leave them out of consideration, in order to fix our attention upon some of the more general results of the fact of diminishing productivity.

If the number of laborers within the boundaries of a nation is increased by immigration, without a corresponding increase in capital or in the amount of land available for use, the result will be an increase in the total amount of goods produced, which means an increase in the amount of wealth produced per unit of land and capital, but (on account of the operation of the law of diminishing productivity) a decreased amount per laborer; a higher marginal product for land and capital, and a lower marginal product for labor; consequently, higher rent and higher interest, but lower wages. If the supply of capital within a country is increased, while labor and land remain constant, the result will be higher wages and higher rents, but a smaller remuneration for capital. Similarly, if the available supply of land be increased (as by improvements in transportation facilities), rent will absorb relatively less, and wages and interest relatively more, of the value of the total product.

In a very real sense the same laborer is more productive in a country where land is relatively plentiful than in a country where land is relatively scarce. A laborer may gain no technical

efficiency by migration from Europe to America, but the increment of product attributable to his work is apt to be considerably larger in the United States than it was in Europe. Here he really creates a larger product and earns a larger wage. The migrations of labor and capital from one region to another, or from one country to another, are guided by the endeavors of capitalists and laborers to get the maximum remuneration, — which will always be found where the price of the marginal product of capital or labor is a maximum.

In a prosperous country it is apt to be the case that the supply of labor and the supply of capital are being increased simultaneously, though not necessarily with equal rapidity, while more land is at the same time being made available through improvements in transportation. Save under such exceptional conditions of railway building as prevailed in the United States during the forty years following the Civil War, the available supply of land is apt to increase more slowly than the other factors in production increase. In general, the law of diminishing productivity will necessitate a continual increase in the proportion of the product set aside for the remuneration of each unit of the most slowly increasing factor in production; while, of the other two factors, the one that increases more rapidly will receive, per unit, a relatively smaller and smaller proportion of the value of the total product.

QUESTIONS

1. Do you know of any instances where the distribution of wealth has been affected, directly or indirectly, by conscious social action?
2. Prepare tables or diagrams roughly illustrating the operation of the law of diminishing productivity in some industry with which you are familiar.
3. Why is the same laborer more productive in America than in Europe? Is this a condition that will probably continue indefinitely?
4. Why do lands in Belgium produce more per acre than similar lands in the United States?
5. Is that fact that the average wheat crop per acre is larger in Europe than in the United States an indication that European agricultural methods are superior?
6. Which is the more significant: product per acre or product per man?
7. Why are twenty-story office buildings not erected in small cities?

8. Can an entrepreneur increase his product indefinitely by using continually larger amounts of *all* the agents in production?

9. What is the relation of the discussion in this chapter to the socialist contention that labor produces all wealth?

10. Discuss the following statement:

"Each man, taking account of his own means, will push the investment of capital in his business in each several direction until what appears in his judgment to be the outer limit, or margin, of profitableness is reached; that is, until there seems to him no good reason for thinking that the gains resulting from any further investment in that particular direction would compensate him for his outlay. The margin of profitableness is not to be regarded as a mere point on any one fixed line of profitable investment; but as a boundary line of irregular shape cutting one after another every possible line of investment." Alfred Marshall, *Principles of Economics*, 6th ed., p. 356.

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CHAPTER XX

THE RENT OF LAND

RENT is the price paid for the services of land. In common usage the meaning of the word is, however, much less exact. That which one pays for the use of durable goods of any kind owned by another is commonly called rent. The payment for the use of a house or a business building is, for example, counted as rent. We shall see that in this case the so-called rent really consists of two elements, — one a ground rent, or rent proper, the other capital rent. If this distinction seems fanciful, it is only because we are accustomed to see the two united under one ownership. But in most large cities separate ownership is common. Sometimes one man owns the land and leases it for a long term of years to another who erects buildings upon it, which, either with or without payment, become the property of the landowner at the expiration of the lease, unless it is renewed, and if it is renewed, the one who possesses the building must frequently pay for it. Often, however, the separation in ownership is permanent, the house owner paying perpetually an annual sum for the use of the ground. This is the case in Baltimore, for example, where ground rents are an important feature in the economic life of the city. In such cases the two kinds of income are very clearly distinguished.

Some modern economists have extended the meaning of both rent and interest, using them as two different ways of describing one form of income, rather than as two distinct kinds of income. This usage is based on the obvious fact that the rent which a landlord receives for an acre of land may easily be computed as a certain rate of interest on the money value of the land, just as the amount earned by a machine may be viewed either as the rent of the machine or as interest on its money price.

But we shall see later that the income from other production goods, while governed in part by the same laws that control the income from land, is also governed in part by very different laws. Without dwelling further upon this distinction at this stage of our discussion, let us remember that in the great majority of economic writings the term "rent" means only an income derived from the ownership of land, and that it is used only in this sense in the following discussion.

The Services of Land. — The first thing to be noted about land is its *quality*. Differences of fertility are familiar to every one, and depend upon what have been known as the "original and indestructible properties of the soil." An effort has been made by certain writers to minimize or deny the significance of this factor. It has been said that "soil" is not indestructible, that it may be exhausted or removed from land altogether, and that it may in turn be created by means of fertilization. These writers recognize in land no other indestructible property than standing room. This objection arises from the use of the word "soil" in a narrow sense.

If by "soil" we mean only that thin top layer containing some elements necessary to plant life, it is true that this may be carted on or off at pleasure, that it may be wasted or replenished. But, granting this, there still remain many qualities of land which are indestructible and unproducible, and which so directly affect the productiveness of the land that we may not inappropriately call them "properties of the soil." Such a property is the conformation of the land. A steep, gravelly hillside will by no possible effort equal a plain in fertility. The north side of a mountain cannot be made to produce the same as the south side. Climate is not, to be sure, a "property of the soil," but it is an inseparable appurtenance of the land, and upon it the productiveness of the land in large measure depends. The ownership of a piece of land carries with it the advantage of all the conditions which attach to that land. The expression, "original and indestructible properties of the soil," is inadequate and misleading; but it covers more than mere "standing room."

We will, therefore, adopt another expression to explain what we mean by *quality* in land; namely, the *irremovable conditions affecting its productiveness*. Of these its extent (standing room), its conformation, and its climate are essentially original and indestructible. Others, such as are connected with the "soil" in the narrow sense, are not indestructible nor necessarily original, but they affect rent none the less. Fertility, even when artificial, becomes essentially a property of the land. From the case where capital is embodied in land and entirely assimilated to it in character, we pass by insensible gradations to fences, barns, houses, etc., which more and more assume the character of capital as distinguished from land. It would be possible to restrict the term "land" to strictly natural or "original" land, and apply the term "capital" to all products, including the soils of old land. This would be a logical distinction, but, like so many logical distinctions, would be confusing. On the other hand, if we include under land all capital that has been incorporated in it, we must recognize that there is no absolute line of division between land and capital. Thus we are again reminded that distinctions in economics, as well as in practical life, are questions of convenience, and are good or bad according as they are more or less useful.

The second great fact regarding land is *location*. On one side this is closely connected with climate. But a more distinct meaning of the word is situation with respect to markets. Everybody knows that land a hundred miles from market is, other things being equal, worth more than land a thousand miles from market. This, however, is a question of accessibility rather than of mere distance. Land may be far away and yet easy to reach, or near and difficult of access. Any change in the expense of transportation affects rents. The rents of England have been revolutionized by cheap ocean transportation, which has practically brought distant land very near to her shores. To this fact of location we must ascribe almost wholly the enormous rents paid for city lots. Here, again, transportation facilities powerfully affect rents.

One important difference in the way quality and location affect

rent must, however, be noted. The *quality* of a piece of land affects the amount of its *physical product;* it determines how many bushels of wheat or how many pounds of cotton it will yield with a given amount of cultivation. The *location* of land does not, it is true, affect the amount of its physical product, but it does affect the *price of the product*, since that varies with the expense of transporting the product to market. The money value of a piece of land to the user depends upon the money value of its yield, which is, of course, the number of units of products multiplied by the price per unit. Suppose a man owns two wheat farms of equal size, one in Dakota and one in Illinois. If the farm in Dakota produces thirty bushels of wheat to the acre, and it costs twenty cents a bushel to get it to the Chicago market, where wheat is selling at a dollar per bushel, while the farm in Illinois produces twenty-five bushels to the acre, and it costs four cents a bushel to get this to the Chicago market, the farms are equally productive so far as the owner is concerned, for in each case he will get $24 for an acre's yield of wheat. If the other conditions of production are the same, the farms are equally valuable to the owner. From the social point of view, too, one of the farms is as good as the other. For the costs of transportation, of moving things to where they are wanted, have to be counted among the legitimate and necessary costs of production. In short, we may say that the two pieces of land are equally *good* land. When we speak of good land, therefore, in connection with the subject of rent, we mean land which for all purposes taken together is desirable.

Rent under Assumed Conditions of Uniform Intensivity of Cultivation. — The first settlers in a new country have no need to pay rent. They find plenty of land, and even the best of it will be a free good, like air or water. So long as any man can get land of the best quality free, there is no reason why he should pay rent to any one else. But this fortunate state of affairs will last only so long as some of the best lands remain unoccupied. When increase in the population makes the utilization of inferior lands necessary, the owners of the better lands will be able to demand

and receive a rent for the use of their lands. This will be made clear by reference to Figure 1, which is constructed on the assumption that there are six grades of land, *A*, *B*, *C*, *D*, *E*, and *F*, and that for all these lands the same amount of cultivation per acre is necessary. The successive rectangles represent the selling value of the product that can be raised on one

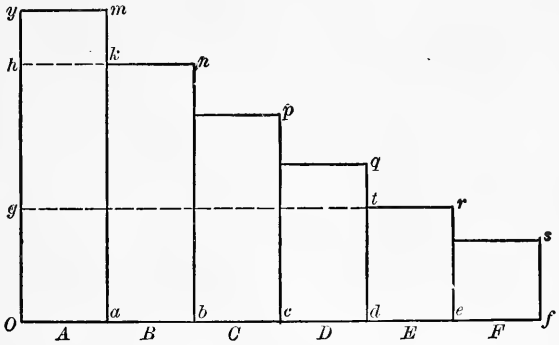

FIG. 1.

acre of each of these different grades of land, by the use of a fixed amount of labor and capital. The product of an acre of the best land, *A*, will sell for *Oamy* dollars. Until all of this best land is occupied, no rent will be paid, and the entire value of the product will be available for the expense of the capital and the wages of labor employed in its cultivation.[1]

As soon, however, as it becomes necessary to cultivate some of the *B* lands, the situation will be altered. The owners of the *A* lands can now exact a rent for their use, and the tenant farmer has no alternative, except to utilize land of the second grade, on which the fixed amount of labor and capital will only produce a product per acre selling for *abnk* dollars. The rent which will be paid per acre for *A* lands will amount to the difference between the value of the products of the two grades of land (*hkmy* in the diagram). For if the landowners attempt to charge more than this difference, tenant farmers will find it more

[1] The profits which the farmer may receive as entrepreneur do not affect the analysis, and may accordingly be neglected.

advantageous to use the *B* lands; if they charge less, the *A* lands will be the more remunerative to the farmer, and competition among the farmers for the leases of *A* lands will force the rent up. In short, rent will normally be fixed at the point which will *just equalize the advantages of cultivating the two kinds of land.*

As soon as increased population and the consequent need of a larger food supply and more raw materials have forced men to begin to cultivate lands of the *C* grade, the *B* lands will command a rent, while the rent of the *A* lands will be increased by an amount equal to the rent of the *B* lands. And as cultivation is pushed down to still poorer and poorer lands, the rents which these better lands command will be still further increased. Thus, when some lands of grade *E* are in use, the value of the product which can be got from this free land, by the use of the fixed amount of labor and capital, will be *dert* dollars per acre. This sum will just about pay the cost of labor and capital, for if it amounts to less than these expenses of production, the *E* lands will not be worth cultivating; if it amounts to very much more, it will pay to cultivate still poorer land. But if *dert* dollars will just pay wages and interest on the *E* lands, the same sum will pay wages and interest on the better lands, for we have assumed that the same amount of labor and capital is used on each grade of land. The expense for labor and capital will, therefore, be represented on each rectangle by the area below the line *gt*, while the area above this line will represent in each case the rent per acre which the landowner will receive.

Rent, under these conditions, is a differential which measures accurately the superiority of the rent-bearing land over the *marginal land* — the land which just repays the expenses of cultivation. It is not necessary to the significance of the theory that all, or even any, of the farmers should be tenant farmers. If the farmer owns the land that he operates, the part of his income to which may be attributed the superiority of his land over an equal area of marginal land must, in any accurate analysis, be counted as rent.

Rent under Actual Conditions. — The conditions assumed in the foregoing analysis depart from actual conditions in one important particular, — the assumption that equal amounts of labor and capital, that is, a uniform intensivity of cultivation, would be used on lands of different grades. As a matter of fact, even after the *A* lands are all occupied, the supply of agricultural products can be increased without resort to poorer lands. All that is really necessary is the more intensive cultivation of the *A* lands. This cannot be done, however, without encountering the law of diminishing productivity. Successive equal amounts of labor and capital used on the same lands cannot be expected to yield uniformly large increments of product. It will pay, however, to make use of more intensive cultivation up to the point where the last unit of labor and capital adds barely enough to the product to pay for the increased expense, — a point which is called the *intensive margin*. The result of this more intensive cultivation is represented in Figure 2. Now the first rectangle in this diagram (*Oamy*) represents precisely the same thing as is represented by the first rectangle in Figure 1, the return (in value of product) from the cultivation of an acre of land of *A* grade by the use of a fixed amount of labor and capital. The second rectangle in Figure 2, however, represents the additional product resulting from the use of a similar unit of labor and capital on the *same acre*, while the third represents the increment of product due to the employment of yet a third unit of labor and capital on the same land. Assume that this third unit, A_2, adds just enough to the selling value of the product to pay for itself. Then, as already explained in the discussion of diminishing productivity, the area *Ocph* will represent that part of the farmer's income which will be used up by the expense incurred for the three units of labor

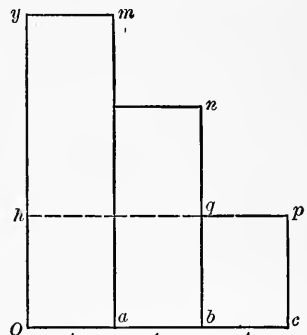

FIG. 2.

and capital used on this one acre of land, and the area above the line *hq* will represent the real rent of that acre.[1] If land *E* (Figure 1) just repays the expenses of cultivation when one unit of labor and capital is used per acre, the value of the product per acre of this land will equal the value of the increment of product attributable to the third unit of labor and capital used on land *A*. (That is, the area *dert*, Figure 1, equals the area *bcpq*, Figure 2.) So far, then, as the margin of cultivation is concerned, Figure 1 represents the conditions accurately. The productivity of capital and labor at the intensive and extensive margins is the same.

But Figure 1 does not represent the complete theory of rent in that (1) it does not indicate the fact that larger quantities of capital and labor are used on the better lands than on the poorer lands, and (2) it does not represent the larger products due to this more intensive cultivation of the better lands. These considerations are taken account of in Figure 3, which also, by the substitution of curves for successive rectangles, represents the infinite variety of degrees of goodness of the different acres making up the land supply of a country. In Figure 3 the line *am* represents the money value of a product of a unit of labor and capital on the poorest land in use, and the area *hmi* represents what rent would be under conditions of uniform intensivity of cultivation. The area *Oamg* represents the diminishing amounts of labor and capital used per acre as we pass from the better to the poorer lands, while the area *ymg* represents the rent per acre of the different grades of lands. The foregoing analysis leads to the following

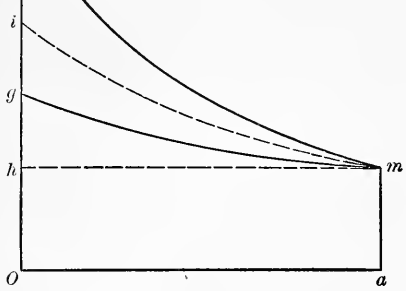

FIG. 3.

[1] Neglecting, for the present, the possible existence of profits.

statement of the theory of rent, which the reader may verify for himself by referring to Figures 1 and 2:

The rent of any piece of land is measured by the difference between the money value of the products obtained from it by the use of the most advantageous amounts of labor and capital and the money value of the products which could be obtained by the use of the same amounts of labor and capital on marginal land, or at the intensive margin of cultivation.

This statement should not be understood as comparing the total product raised on a given piece of land with the total product which could be got from the *same amount* of marginal land. This would be to reintroduce the assumption of uniform intensivity of cultivation — an assumption which impaired the adequacy of the theory of rent illustrated in Figure 1 above. On the contrary, it is assumed in the present statement that the farmer would use whatever amount of the marginal land he found most profitable. If it were profitable to use twenty times as much labor and capital on a certain piece of land as on a similar amount of marginal land, to employ the same amount of labor and capital profitably on marginal land would take twenty times as much land.

Rent and the Marginal Product of Land. — In an earlier chapter it was suggested that rent could be measured by the marginal product of land; in other words, that the amount which a farmer would pay *per acre* for the use of land would depend upon the money value of so much of his product as was dependent upon the possession of any one acre of land. In that discussion it was assumed, however, that land was of a uniform degree of goodness. Obviously, if all land really were of a uniform degree of goodness, in all ways equally desirable, no rent would be paid until all lands were utilized, when rent would arise on account of the necessity of increased intensivity of cultivation.

But even under the actual conditions of the existence of different grades of land and of a large body of land which is below the margin of cultivation, the rent of any acre of the better lands can be stated in terms of the value of its product. For the rent of any acre of land is determined by the money value of the amount of the product imputed to it (as distinct from the product imputed to the labor and the capital employed upon it). Now the product that must be imputed to any acre of land is, of course, the amount which it *adds* to the total product, or, what amounts to the same thing, the amount by

which the total product would be decreased if just as much labor and capital were employed in agriculture, but if *that particular acre* of land were not available. This means, however, that the labor and capital which would have been employed on this land would have to be utilized either in cultivating more intensively the lands already utilized or in cultivating lands previously uncultivated; that is, at either the intensive or extensive margin. Obviously the product imputed to the land in question would be the difference between the total product got from it and the product which would result from the employment of the same amount of labor and capital at the margin. Thus, by a somewhat different line of analysis, we have again reached the statement of the theory of rent given in the preceding section.

The Different Uses of Land. — We have seen that the better lands will repay a more intensive cultivation than the poorer lands, and have found this fact to be of great significance in the theory of rent. By varying degrees of intensivity of cultivation we do not mean only the more thorough cultivation of the land in the raising of any one crop. Land produces a great variety of products, and some of these need much more intensive cultivation than others. In the business of raising cattle, as it is conducted on a large western ranch, the total investment of capital and labor may be very considerable, but the investment per acre of land is very small indeed; while a small market garden, located near a great city, will repay a very high degree of intensivity of cultivation. It is only on the best lands that crops necessitating a large amount of labor per acre can be raised profitably. By the best lands we mean in this connection not only those lands which are best fitted by soil and climate for the production of particular crops, but the best lands in the sense that they are nearest the market. For example, cities in the eastern part of the United States get part of their supply of fresh vegetables from market gardens in their own environs, while another part of this supply may come from the southern states and even across the continent from California. The local market gardens are good lands on account of their situation; the more distant lands are good lands on account of special qualities of soil or climate which enable them to furnish "out of season" vegetables.

Because certain lands are adapted, on account of quality or

location, for intensive cultivation, they command high rents. On the other hand, lands which command high rents for alternative uses generally have to be cultivated intensively, because the entrepreneur is forced by the very fact of high rent to economize in his use of land as compared with his use of capital and labor. The raising of flax as raw material for linen is a profitable agricultural industry in densely populated Belgium, but it has never met with much success in the United States because flax straw of a quality fit for the better grades of linen demands a large amount of care and labor. Land is so plentiful here that it pays us better to specialize in a less intensive kind of agriculture — to spread our labor and capital more thinly over a larger number of acres.

The poorest land that can profitably be used in the growing of *any one kind of product* is not necessarily marginal land. Land too poor to use for market gardening may be good wheat land; land too poor to devote to wheat may be good grazing land. The poorest land devoted to any one purpose may yield a rent, arising from its relative superiority over other lands for some alternative use. It will be readily understood that the marginal lands used as a basis of comparison in our statement of the law of rent are the poorest lands used for any purpose — grazing lands, possibly. But, as we have seen, rent may also be measured from the intensive margin of cultivation, and the intensive margin is found on all lands, even the best.

Although all our illustrations of the theory of rent have been drawn from agriculture, the principle is, in fact, perfectly general. The rent of land used for industrial or commercial purposes is determined in precisely the same way as the rent of agricultural land. In fact, different kinds of manufacturing, wholesale and retail trading, etc., may be looked upon as different possible uses of land, differing in the amount of labor and capital they require, and all subject to the law of diminishing productivity, and hence to the law of rent. When we pass from the agricultural uses of land to its commercial and industrial uses, the fact of quality becomes of practically no impor-

tance in the determination of rent, while the fact of location becomes fundamental.

In addition to these different gainful uses of land, we have to take account of its other uses, such as for pleasure grounds and residence sites. Here the explanation of rent is simpler than in the case of productive lands. For these lands yield their utilities directly, and hence come under the general laws of price.

The Capitalization of Rent. — To the individual who has a certain amount of money for which he is seeking the most profitable use, the question whether he shall invest it in land or other forms of production goods is apt to be in itself an unimportant one. If he chooses to buy land, it will be because he can get a satisfactory income from it, and he will very properly count the income as interest on the funds he has invested in the land. If the income from the land increases, the selling value of the land will increase. From the point of view of our investor this will, of course, be an increase in the "capital value" of the land. It is important to note, however, that the land does not return an income simply because it is valuable. The process is the reverse of this. The land aids annually in the production of goods which command a price in the market; a part of the money value of this annual product is necessarily imputed to the service of land and paid for in the form of economic rent; and the land is valued *because it commands a rent.* The money value of the land is governed by its income-yielding power.

This fundamental fact is apt to escape our notice because in the United States lands are more commonly sold than leased, so that we think of the price of land as the price at which it will sell, rather than as its annual price, or rent, although the first kind of price depends upon the second. In England, where lands are more commonly leased, the price of land is usually thought of as its annual price or rent, while the selling price is often expressed as "twenty (or other number of) years' purchase," meaning twenty times the annual rent. The process by which the capacity to yield a certain annual income is made the basis for the determination of a certain selling price is termed

"capitalization."[1] In a country which is growing in population and wealth, and where land rents are consequently increasing, the selling value of land is apt to be somewhat greater than a capitalization of the amount of income it is yielding at the time of the sale would justify. This is because the ownership of land carries with it the right to receive future as well as present incomes, and the prospectively larger future incomes are taken into account in the process of capitalization.

Rent and Social Progress. — The fact just mentioned — the tendency of rents to increase as society progresses — is of very great significance. It springs from the impossibility of satisfying the increasing wants of a society which is growing in population and wealth without increasing the supply of food products and raw materials by means of more extensive and more intensive cultivation. As this means pushing downward the extensive and intensive margins of cultivation, the necessary result is a rise in rents.

During the early years of the nineteenth century the Napoleonic wars on the continent, together with a high protective tariff in England, kept England from importing any grain from Europe. This, coupled with a considerable increase in the population of England, resulted in very high prices for wheat, a rapid extension of cultivation, and a remarkable rise in rents. It was the effort of economists to explain these facts that led to the formulation of the theory of rent in substantially its present form. Bound up with this theory of rent was the *law of diminishing returns* — the name usually given to the fact that an increasing population cannot supply itself with food and raw materials except by the utilization of poorer and poorer lands, and consequently at an increasing expense per unit of product. (This law should not be confused with the law of diminishing

[1] The nature of this process of capitalization will be discussed in the chapter on Interest. It is a fact of common observation that the rate of capitalization, that is, the ratio of income to selling value, is lower in the case of land than in the case of most forms of capital goods. The durability of land, the variety of uses to which it may be put, the social prestige attached to land ownership, as well as the fact that in many cases its income-yielding power is likely to increase, are among the things that account for this.

productivity. One is a statement of a historical tendency in one field of production — agriculture; the other relates to the proportions in which the factors of production are combined, and holds true for all fields of production.)

This law of diminishing returns has been made the basis of many gloomy prophecies regarding the possibilities of a general and continued economic progress. Especially when this theory was combined with the Malthusian theory of population, which was based on the belief that population would tend to increase as fast as the food supply would permit, it seemed to point to insuperable barriers in the way of any considerable progress in human welfare.

The history of the past century has belied these gloomy prophecies. The increase in population has been greater than in any previous period of the world's history, and yet, so far as agricultural lands are concerned, the general level of rents has not increased. In fact, the change has been in the other direction. That rents have not increased as population has grown, does not disprove the law of diminishing returns. That law, like other economic laws, is true only as a statement of a *tendency*. If this tendency has not resulted in increased rents, it is not because it has not been operative, but because other powerful factors have counteracted its effects. Two things, at least, have prevented a rise in rents. In the first place, improvements in agricultural methods have greatly increased the product which can be got from a given acre of land. We must include here not only improvements in methods of tillage and cultivation, in fertilizers, in the varieties of plants, in breeds of live stock, etc., but also organized social methods looking toward a better utilization of the nation's land supply, such as the irrigation of dry lands, and scientific forestry, which has an important influence upon the conservation of the rainfall.

Of much greater importance, however, than all these things taken together, has been the revolution in ocean and land transportation, which has enormously increased the available amount of land. Lands in England have gone out of cultiva-

tion because the railway and the steamship have brought the great wheat fields of America to her very doors. Even in the United States the new lands brought near to market by the railways have often been of better quality than the lands previously cultivated, so that the margin of cultivation has gone up rather than down. There were 2,250,000 acres of improved farming lands in the state of New Hampshire in 1850; by 1900 this acreage had shrunk to 1,075,000. In Massachusetts the improved farm lands decreased in this period of fifty years from 2,135,000 acres to 1,300,000 acres. Similar figures could be given for others of the older states. The diminution in the use of old lands may be partly accounted for by their deterioration in fertility under continual cultivation without proper rotation of crops. But this is only a partial explanation, for any one who is familiar with the conditions knows that even the most careful tillage could not have kept millions of acres of farm land which were once rent-yielding from going below the margin of cultivation, for the simple reason that the margin of cultivation rose. The railway practice of making very much lower rates per mile on long hauls than on short hauls has hastened this process, by minimizing the disadvantages of lands of good quality situated at a distance from the market.

The fact that since the introduction of the railway the margin of cultivation has risen does not mean that it has risen continuously, or that it will continue to rise. There are many who believe that we have only gained a brief and already passing respite from the day when every increase in the demand for food products and raw materials will be met only with increasing difficulty. It is as dangerous to prophesy, however, as it was a hundred years ago. The fact that there still remain some unutilized lands of good quality in what are now out-of-the-way parts of the world may prove to be of less importance than other things. It is a striking fact that in the United States today only about half of the land actually in farms is cultivated. Some of these uncultivated portions of farms are very poor lands, and others are given over to meadows and pastures. But we venture to say that what idle acreage exists is due in

part to a lack of correspondence between the historical conditions that have fixed the size of farms and the economic conditions that fix the number of acres that can be profitably utilized by one farmer. This unexploited area is, to that extent at least, a reserve which can be drawn upon as the demand for agricultural products increases. Then, too, we are just beginning to have some idea of the improvements which scientific selection may bring about in the qualities and productiveness of different kinds of plants; methods of fertilization and tillage are still the subjects of fruitful scientific inquiry; forestry and irrigation are yet in their infancy. Changes in demand, of such a nature as to make possible the utilization of some lands for the production of crops for which they are better fitted than for their present uses, are also among the things that may resist the tendency toward a general rise in rents. In fact, although it is absurd to suppose that the rent of land will not increase as society continues to increase in wealth and numbers, it is just as absurd to make this fundamental tendency toward diminishing returns in agriculture a basis for pessimistic views regarding the possibility of economic progress.

The Unearned Increment. — When we say that the margin of cultivation has gone up, rather than down, since 1850, we do not imply that rents have not, in many cases, increased. The new lands opened up to use by new railways, for example, are at first very cheap lands, often free lands. As they are taken up, they command higher and higher rents. Practically all of the agricultural lands now utilized in America have had such a history, — even though in some cases the present rents are not as high as their rents at some previous time. The fact that, through the change in transportation methods, the marginal farming lands of today are better lands than the marginal farming lands of sixty years ago does not affect the fact that the sum total of land rents, and consequently of land values, is immensely greater today than at any previous time. The increase in the value of land which accompanies the increase in its income-yielding power is often called the *unearned increment.* This phrase suggests that the increase in land values cannot be

attributed to any special effort on the part of the owners of land, but is due to general social causes.

This does not mean that the land-owning farmer cannot increase the selling value of his farm by wise investments of capital; but, remembering that rent is the payment for the irremovable conditions affecting the productiveness of land, it is clear that it can be affected only to a comparatively small degree by the efforts of any one individual landowner. Most of the present money value of land has grown out of that complex of things which we call general social progress, the most important of which in this connection are growth in population and growth in average wealth — the things that lead to an increased demand for the products of the soil. We should, however, be careful to distinguish the rise in the sum total of rents which springs from the occupation of new and often better lands, and the increase in rent *per acre*, which comes from forcing downward the margin of cultivation.

Despite these facts, the phrase unearned increment is misleading. As generally used, it implies a confusion of two very different things, — physical quantities (acres) and selling values. From the fact that land is, in a physical sense, rarely "produced" it is inferred that the selling value of land is always "unearned." Other forms of wealth, it is sometimes urged, are valuable (command a high price) because they are produced at a cost; land has no "expenses of production," and is valuable only because there is a demand for land and for its products. Now the reader should be able to see that this is not an altogether accurate way of stating the case. Produced goods, like land, are valuable only *because* people want them and are willing to pay for them. Other things have to be paid for because otherwise it will not be worth while for any one to go to the expense of producing them; land commands a price because its supply is naturally limited, and because there are competing users of land who can apportion the available supply among themselves only on the basis of prices and rents corresponding with the advantages which particular units of land give to their possessors.

And so far as the increase in land values can be *foreseen*, it can rarely be "unearned." For the increase in the selling value of the land will be taken into account and discounted. This occurs in two ways. In the first place, the present selling value of such land will be higher than that of other property with similar annual income-yielding power. Usually both the seller and the buyer of land will take into account the probable increase in its selling value and will count this as an additional gain or profit attached to the possession of the land. In other words, the expected increment in value will be translated into terms of present worth, and added to what would otherwise be the present selling value of the land. The increment, so far as it can be foreseen, has to be paid for. In the second place, it is often incorrect to consider the expense of buying and holding land as a thing apart from the other expenses and gains of the business enterprise in which the land is used. The man who builds a house to let takes into account, (1) the expense of acquiring the land, (2) the expense of building the house, (3) taxes and repairs, (4) the probable ultimate depreciation of the rental value of the house, (5) the probable appreciation in the rental or selling value of the land. It is common in such operations to assume that the fourth and fifth factors roughly offset each other. Most of the "free" land distributed under the Homestead Act was acquired by men who would have thought their expected incomes, outside of the probable increase in land values, insufficient to justify them in acquiring and improving the lands. Any one who has watched the settlement of western states and the growth of American cities knows that an enormous amount of effort and sacrifice has been put into improvements on land which would not have been put forth if the anticipated increase in the value of the land itself had not been counted on as part of the earned reward.

There are unearned increments, — unexpected and undiscounted increases in the values of land, and, for that matter, in other capital values as well. But there are "unearned decrements," too. The extent to which these really unearned incre-

ments are, in the aggregate, offset by unexpected and undiscounted shrinkages in land values and other capital values is a matter upon which we have, as yet, no adequate information.

An American reformer, Henry George, converted a large following to his view that all taxes should be levied upon land values. This scheme, known as the "single tax," proposes that economic rent shall go to the government in lieu of taxes — a proceeding which would amount to the government ownership of land, and is so understood by its adherents. The merits and defects of the single tax as a scheme for raising public revenue will be considered in another place. Here we are concerned with it simply as a scheme of economic reform. Henry George's main argument was based on the alleged tendency of land to absorb all the value due to "improvements in the productive power of labor." Among these improvements in the productive power of labor he included such diverse things as "the growth of population, the increase and extension of exchanges, the discoveries of science, the march of invention, the spread of education, the improvement of government," etc. "Land being necessary to labor, and being reduced to private ownership, every increase in the productive power of labor but increases rent — the price that labor must pay for the opportunity to utilize its powers, and thus all the advantages gained by the march of progress go to the owner of land, and wages do not increase."

In the first place, we may object strongly to the assumption that improvements in methods of production necessarily mean improvements in the "productive power of labor" — an assumption which, like the socialists' labor theory of value, really begs the whole question. It would be just as reasonable to call these things improvements in the productive power of capital or improvements in the productive power of land. In the second place, we must enter an emphatic denial to the statement that "all the advantages gained by the march of progress go to the owner of land." If the supply of labor is increasing more rapidly than the supply of land, it is probable that rent per acre will increase faster than wages per laborer; but this does not preclude an advance in wages.

It must be remembered, too, that Henry George did not propose to abolish rent — an obvious impossibility — but simply to do away with the private receipt of rent. This would prevent the withholding of land from use for purely speculative purposes; thus increase the available supply of land, and consequently lower rents. That such would be the immediate result of throwing all land open to use cannot be denied. But in the long run it would probably have little effect on rent, as it would simply lead to a more rapid exploitation of the land. Land ownership, like any other institution, has to be judged from the viewpoint of general social interests. The "pride of ownership," as an incentive to accumulation and as a basis for good citizenship, cannot be lightly put aside.

Urban Lands. — In the modern city we have a tremendous mass of land values resulting from the concentration of a large population on a relatively small area.[1] All are familiar with the narrow limits set upon the wholesale districts, the shopping districts, and the financial districts in American cities. The residence districts to which the greatest social prestige attaches are apt to be quite as narrowly restricted. Improvements in rapid transit facilities enlarge the residence areas that are utilized by people with moderate incomes, but only serve to increase the congestion in the business centers. Much has been said in favor of the special taxation of city land values. Movements in this direction have already gained great strength in Europe. If such taxes are to be justified, however, it must be primarily on grounds of fiscal convenience. In urban lands, as elsewhere, there are true unearned increments and true unearned decrements, but it would be going altogether too far to name the whole mass of urban land values, enormous as it, unearned increment.

QUESTIONS AND EXERCISES

1. Malthus and Ricardo differed as to whether rent is an *addition* to the total income of society. What is the correct view?

2. An accepted doctrine of taxation is that landowners cannot shift a tax on land values to any one else (as the tax on toabcco is shifted from the manufacturer to the consumer). Explain this on the basis of the theory of rent.

3. "Rent does not enter into the determination of normal price." Explain the meaning of this statement.

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[1] The assessed value of land, *exclusive* of improvements, in the city of New York, amounted in 1907 to over three and a half billions of dollars — an amount nearly twice as great as the assessed value of all the real estate, *including* improvements in the state of New York outside of the city.

CHAPTER XXI

THE WAGES OF LABOR

Wages constitute the price paid for the services of labor. Under the head of " labor " we include all the various kinds of personal services for which a payment is made. Professional men and salaried employees are wage earners in the economic sense, though the term is by common usage generally restricted to manual laborers working for daily or weekly payments. There is, however, in society to-day, as every one recognizes, a " laboring class," marked off by lines that are fairly distinct, and including the great body of day laborers, factory hands, agricultural laborers, men in various trades requiring various degrees of intelligence and skill, employees in minor positions in business and mercantile establishments, and the like. Some of the most important and pressing present-day economic problems — the variety of things that make up what is often called the " labor problem " — relate to the economic position of this class. On this account it becomes of special importance to ascertain just what the rules are that determine its share in the national dividend. In the discussion of wages, then, we have in mind primarily the income of the " laboring class," although most of the principles that will be developed apply just as accurately to the other incomes that must be classed as wages in the economic sense.

Wages as the Price of Labor. — The definition of wages already given suggests at once the most important fact about them: they are the prices paid for particular kinds of services, and hence come under the general laws of supply and demand. So far as the wages of any one kind of labor are concerned, we can say, as we did of the prices of commodities, that they will tend to be fixed at the point where the supply of that kind of

labor and the demand for it are in equilibrium. But, as was found in the discussion of the prices of commodities, this simple statement does not take us very far into the analysis of the problem. We want to know why the supply of labor and the demand for it are what they are. We shall find, too, that the factors governing the supply and demand of labor are in some respects very different from those governing the supply and demand of commodities.

The Demand for Labor. — The demand for labor is, in the last analysis, a demand for the products of labor. Labor does not command a price on its own account, but because it aids in the production of things that satisfy human wants. But how can we measure the product of labor? How can we distinguish it from the shares in the total product that are to be attributed to land and capital? We cannot say that the product of labor is to be measured by the difference between the total product produced by the coöperation of labor, land, and capital and the product which would be produced by land and capital working alone; for this last would, of course, be zero. The fact is, as we have seen in a previous chapter, that the proportion of the product that is attributed to labor is determined by the principle of *specific or marginal productivity*.

That is, we cannot think of the "product of labor," except as the product of the individual laborers making up the supply of labor, and the product of any individual laborer is actually and exactly the amount which he adds to the total product of land, labor, and capital; in other words, the amount by which the total product would be decreased if the labor of this individual laborer were not utilized. The social demand for the products of labor, which is the basis of the entrepreneur's demand for labor, is not a demand for any vague abstraction like the "product of labor in general," but is a demand for the concrete products due to the activities of individual laborers.

We must note also that in the case of labor, as in the case of commodities, the word "demand" must not be taken in a loose, indefinite sense. The demand for commodities means

the quantities that will be taken at certain definite prices. The demand for labor does not mean anything unless it is understood to refer to the number of laborers that will be employed in a particular occupation at a certain wage. In a given occupation at a particular time wages might be fixed at any one of a large number of different possible points. The higher the wage, the smaller will be the number of laborers that an entrepreneur can afford to employ; and that for two reasons: In the first place, the higher wages mean higher expenses of production, and consequently higher prices will have to be charged for the product — a fact which will reduce the quantity of the product that can be sold on the market, and consequently reduce the demand for labor. In the second place, higher wages for labor will induce entrepreneurs to economize in the use of labor, and to use relatively more land and capital, according to the principles which have been explained in the discussion of diminishing productivity. The demand for any particular kind of labor is thus influenced both by variations in the demand for the products of that particular kind of labor, and in the proportion of the product that can be attributed to labor rather than to land and capital.

In a similar way the *elasticity* of the demand for any kind of labor — the *extent* to which variations in wages will affect the quantity of labor utilized — is a complex function, being affected not only by the elasticity of the demand for the particular products produced by this kind of labor, but also by the readiness with which more capital or more land, or both, can be substituted for labor, as labor becomes higher priced. In the printing industry, for example, a rise in wages would make it profitable for employing printers to use more labor-saving machinery, such as typesetting and linotype machines, automatic press feeders, and the like. The higher the wages of agricultural laborers, the more profitable will be the more extensive, as compared with the more intensive, uses of land. On the other hand, the reader will at once think of many trades, such as plumbing, where machinery cannot be substituted for hand labor, and where, consequently, the only elastic element in the

demand for labor lies in the elasticity of the demand for the products of labor.

The Effect of Labor-saving Machinery on the Demand for Labor. In what has just been said about the use of machinery as a substitute for labor, we have had in mind only the effect of changes of wages on the relative amounts of labor and of capital that would be used in any one branch of production. Quite another problem, and one of great social importance, relates to the way in which the demand for labor is affected by new inventions and by the introduction of new machine processes. The laborers themselves have often looked at such innovations with hostility. When machinery first began to be used extensively in the woolen industry in England, this opposition was expressed in riots in which the new machines were destroyed, as well as in "proposals to impose legislative restrictions on the use of machines, so as to bring them to a level with hand work, and prevent them from doing the work more quickly or more cheaply than it could be done by hand." [1] In many instances laborers still are inclined to view the introduction of labor-saving machinery as an economic injury to themselves. On the other hand, there are many persons who claim that this attitude on the part of the laborers is an evidence of shortsightedness, since the inevitable result of machine production is to cheapen the prices of products and thus to lower the cost of living, the net result being an increase in *real wages*, as contrasted with nominal or money wages.

This view emphasizes an important truth, and yet it misses the real point of the laborers' alleged grievance. It is true that while the first result of the introduction of improved methods of production is often to bring larger profits to those who introduce them (especially if the new methods are protected by patents), their benefits are ultimately diffused throughout society at large in the form of the fuller and better satisfaction of wants, and the laboring class, as members of society, share in these advantages. But while it is thus true that such improvements ultimately redound to the benefit of laborers as a class, it is equally true that hardship to many individual laborers is often an *immediate result* of the introduction of labor-saving machinery. Especially is this true in the case of skilled workmen in highly specialized employments, who sometimes find themselves suddenly deprived of the advantages of their skill, — gained often by long years of apprenticeship. To expect that such men will feel that they are compensated for their personal loss by the advantages ultimately accruing to laborers as a class, is to ask too much of the altruistic elements in human nature. Workmen have learned, however, from the experience of the past hundred years, that the introduction of machinery is inevitable, and in the better-organized trades they are in many cases pursuing the wiser course of trying to regulate the conditions of the introduction of new kinds of labor-saving machinery

[1] Cunningham and McArthur, *English Industrial History*, p. 226.

in such a way as to diminish the hardship inflicted on individual workingmen. Thus, when the linotype machine began to displace hand compositors in the printing trade, the typographical union was able to secure the retention of many hand compositors as linotype operators, together with a reduction in the length of the working day.

It should be noted also that the effect of the introduction of machinery upon the demand for labor varies in different industries, the most important factor in this connection being the elasticity of the demand for the products of the particular trade affected. In the case of the linotype just mentioned, the lessened cost of composition made it possible for newspapers greatly to increase their reading matter, so that the actual reduction in the number of employees was small compared with what might have been expected. The introduction of machine methods into the English textile industry during the period of the Industrial Revolution furnishes an instructive example. The change in the methods of manufacturing cotton cloth came just as the invention of the cotton gin had greatly increased and cheapened the supply of raw material. This, coupled with the decreased cost of manufacturing, so cheapened cotton cloth (which had previously been very expensive) that its use was largely increased. In fact, a great many more persons were employed in spinning and weaving cotton soon after the Industrial Revolution than immediately before it. In the woolen industry, however, there was no such immediate increase in the sale of the product, so that many workers were displaced, and had to seek occupations where their specialized skill was of no avail. Especially when the occupation affected is a highly specialized but relatively unimportant one in a series of processes comprised in the manufacture of a product the wage-earning power of the displaced laborers is apt to be seriously diminished.

The Supply of Labor. — It is when we fix our attention upon the nature of the supply of labor that differences between the way in which wages are determined and the way in which the prices of commodities are determined become most noticeable.

In the first place, if we view industry in general, we notice that in the case of labor there cannot be much difference between the actual supply and what we called, when discussing exchange value, the "potential supply." Labor is in this particular like the most perishable of commodities: the number of working days in a man's life is limited, and those that are not sold are irrevocably gone. The laborer has, it is true, some power in the way of "holding out for higher wages," but even this power is limited rather narrowly by the absolute necessity of

making a livelihood. In the long run small wages are better than none. The sale of labor is often a forced sale.

In the second place, the fact that labor is inseparable from the person of the laborer has important results. When the laborer enters into an agreement to work for wages, he not only sells his labor, but he gives up a certain amount of control over his own life; he agrees to live and work under conditions — often unpleasant ones — set for him by others; he accepts, in short, all the environment of his task, as well as the task itself.

Connected to some extent with this last fact is a third difference — the relative immobility of labor. Commodities may always be sent to the market where they will command the best price, but the laborer is restrained by family ties, patriotism, differences in language, customs, and religion, ignorance, and the like. The result is that variations in wages as between different countries or as between different localities in the same country are much greater than similar variations in prices.

The Relation of the Structure of the Population to the Supply of Labor. — We are apt to take it for granted that the supply of labor in different countries and localities depends primarily on the numbers of the population. This is, of course, fundamentally true, but we must also note that the *structure* of the population is a variable thing, and one that affects the supply of labor. Over four fifths of the persons employed in gainful occupations in the United States in 1910 were males — a fact which suggests that the relative proportions of the sexes in the population have an important effect on the supply of labor. There are more males than females in the population of the United States, while the reverse is true of most European countries, this difference being due in large part to the excess of males among our European immigrants. There are important differences in this respect between the individual states. Males constitute nearly two thirds of the population of Montana and less than one half of the population of Massachusetts. The age composition of the population must also be taken into account. The United States census of 1910 showed that nine

tenths of the persons engaged in gainful occupations were between 15 and 65 years of age — comprising what is sometimes called the "productive age group." A larger proportion of the population of the United States is between these ages than is the case in most European countries — a fact which is due to the large number of foreign-born adults in our population. In most European countries a larger proportion of the population is of "productive age" than is true for the native population of the United States. In considering the effect of these natural groupings of the population upon the supply of labor, we have to also take account of differences in the nature of industries, in national or local customs, and in the presence or absence of legal restrictions, — all of which affect the number of women and children who can be counted as part of the available supply of labor. Many observers have suggested that the frequent holidays found in the Latin countries of Europe form an appreciable obstacle in the way of the industrial development of those countries, as they materially diminish the real supply of labor.

The supply of labor is not, however, merely a matter of the number of available laborers; it is also conditioned by their efficiency. The physical strength and vigor, industry, intelligence, ingenuity, and moral qualities of the laboring population determine the amount and kinds of work they can do. These things vary greatly as between different races and as between different individuals of the same race. They are not entirely a matter of heredity, for they can be influenced greatly by the physical and social environment. So far as high wages mean more and better food, and improve the other conditions of living, they tend to increase physical and mental efficiency, and thus to increase the quantity and better the quality of labor that can be got from a given population. There may often be, even when we take only production into account, a real economy in high wages. Public education and public activity in regard to such matters as pure foods, hygienic conditions in homes and in factories, and opportunities for wholesome recreation tend to increase the efficiency of labor, and might be justified on this ground. The right view, however, is that such things would be justified on their own ac-

count, as tending to raise the level of human living, even if they did not increase human efficiency.

The Relation of the Growth of the Population to the Supply of Labor. — Just as the potential supply of commodities at any given time is determined largely by past conditions, so the potential supply of labor at any given time is to a very large extent predetermined. Subject to the limitations which have been mentioned in the preceding section, the supply of labor is a matter of the numbers of the population, and the factors affecting the growth of the population are, from the long-time point of view, the most important things determining the supply of labor.

Most of the discussion of these factors has centered around the *Malthusian theory of population* — the doctrine that population tends to increase faster than the food supply, and is only held back by the actual pressure of famine and disease (arising from an insufficient food supply), or by the prudential motives which restrain men from undertaking the responsibility of marrying and raising families upon incomes insufficient to provide the necessities of life. Just what the first part of this doctrine means can be made clear by referring to the conditions in a country like India, where the population presses so closely upon the food supply that any considerable failure in the rice crop is sure to result in famine and starvation. Every increase in the food supply is followed there by an increase in the birth rate and a decrease in the death rate; every diminution in the food supply is followed by a decrease in the birth rate and an increase in the death rate. The frequent famines in India, which have been charged by some ignorant or prejudiced observers to neglect or incompetence on the part of the British government, are, in fact, absolutely unpreventable, so long as these conditions prevail.

When, however, we fix our attention upon the United States, or England, or any country possessing Western civilization, we notice some things that do not seem to harmonize with the Malthusian theory. The population does not press so closely upon the food supply that any widespread suffering follows a

season of poor crops. Poverty seems to have but little restrictive effect on the birth rate, which is generally higher among the poorer classes than among the well-to-do. Such facts have been cited by critics of the Malthusian theory, some of whom have been inclined to credit it with very little economic significance. Yet when we take a broader view of the facts, they appear in quite a different light.

The best estimates indicate that England did not have over five and a half million inhabitants in 1630, and yet overcrowding at home was one of the reasons commonly given for the policy of colonization which England was undertaking at that time. A hundred years later, despite the growth of industry, and of foreign and domestic trade, as well as some important improvements in agricultural methods, the population had increased to only about 6,200,000. In 1761, on the eve of the Industrial Revolution, the population is estimated to have been about 6,700,000.[1] By 1831, when the factory system was thoroughly established (although England was still trying to raise most of her own food supply), the population had more than doubled, amounting to about 14,000,000. Since that time England has developed her manufacturing and commercial interests, but has imported a larger and larger proportion of her food supply and raw materials from newer countries, where land is cheaper. The latest census of England (1911) showed a population of 36,000,000. There is no explanation of this remarkable growth in the population of a country which was "overcrowded" in 1630, other than the obvious one implied in the fact that the opening up of new countries and the improvements in transportation have enormously increased the world's supply of food products and raw materials — a considerable portion of which England has been able to get for herself through the development of those commercial and manufacturing activities in which her early start, her situation, her coal and iron mines, and her own necessities, have given her a preëminence.

The total population of all Europe in 1760 was probably not over 130,000,000. In 1915 it was about 450,000,000, some

[1] For these estimates, see Census of Great Britain, 1850, Vol. ii.

200,000,000 of this increase having taken place since 1820, and about 150,000,000 since 1872. Account must also be taken of about 125,000,000 persons of European origin or descent living outside of Europe at the beginning of the twentieth century. Moreover, wherever this European expansion has carried Western civilization and industrial methods, the numbers of the native population have more often increased than decreased.[1] Such, for example, is the case in Mexico, South America, the Philippines, Java, India, and Egypt. For at least a hundred and fifty years before the opening of Japan to Western civilization its population had remained nearly stationary. Since 1871 it has increased from 33,000,000 to approximately 53,000,000 (1915). The probability that this great increase in that part of the world's population which has adopted modern industrial methods has come about by a decrease in the death rate rather than by an increase in the birth rate does not alter the significance of the fact that these improved methods of production and transportation have operated like the release of a spring,[2] allowing the natural tendency toward the increase of the population to work itself out more fully.

In view of these facts it is impossible to deny a large amount of significance to the Malthusian theory of population. Population has generally increased wherever the increase in wealth has afforded it opportunity. Yet it does not follow that the Malthusian theory is, in its strictest interpretation, true. Population has not increased as *rapidly* as wealth has increased. Average real incomes are very much higher than they were before the Industrial Revolution — a statement that holds true for average real wages as a particular form of income. Interpreted in the light of the principle of diminishing productivity, this means that population has not increased so rapidly as capital and the available supply of land have increased. If there had been no increase in population during the last one

[1] W. F. Willcox, "The Expansion of Europe in Population," *American Economic Review*, Vol. v, p. 749.

[2] This figure was applied to the effect of an increase in wealth upon the growth of the population by Sir James Steuart, in his treatise on Political Economy (1767).

hundred and fifty years, the marginal productivity of labor would (if, nevertheless, modern methods of production had been developed) have been very much higher than it is, and wages would have been correspondingly higher than they are.

The Subsistence Theory of Wages. — The doctrine that wages tend, in the long run, to equal a bare subsistence, was a theory advanced by English economists in the first quarter of the nineteenth century as a corollary of the Malthusian law of population. Said Ricardo: "The natural price of labor is that price which is necessary to enable the laborers, one with another, to subsist and to perpetuate their race, without either increase or diminution." Granting the premises, the logic was incontrovertible: If wages fall below this level of subsistence, the result will be, in the long run, fewer laborers and therefore higher wages. If the increase in wages goes beyond the level fixed by the cost of subsistence, the result will be, according to the Malthusian doctrine, more laborers and therefore lower wages. The cost of subsistence in this view formed the "expenses of production" of labor, and the actual wages determined by supply and demand were supposed to fluctuate around these normal wages as the market prices of commodities fluctuate around the normal prices fixed by the expenses of production. Socialists and advocates of the single tax have made much of this theory of wages as proving the impossibility of bettering the condition of the laboring class under existing conditions. By some socialists this doctrine, in its most rigid form, has been called the "iron law of wages." But socialists and followers of Henry George alike have to face the difficulty of accepting this theory and at the same time rejecting the theory of population on which it rests — a theory which they cannot accept, for its truth would obviously place insuperable obstacles in the way of any lasting improvement in wages being achieved through the adoption of their schemes. The subsistence theory of wages, if true, would hold just as true under socialism or under the national ownership of land as under existing conditions.

It should be said that the subsistence theory of wages was in part a reflex of the conditions actually existing in England at the

time. Wages were very low, and the law required that deficiencies in wages, below the amount necessary for the maintenance of the laborer and his family, should be made up out of parish funds — a provision which in itself tended to keep down wages, and was made still worse by the fact that the allowance for maintenance to each family was proportioned to the size of the family, thus encouraging the rapid increase of the population.

The Relation of the Standard of Life to the Supply of Labor. — Whatever may have been the case in the past, the subsistence theory of wages does not square with the facts of today, for the amount paid in wages is obviously considerably more than is " necessary to enable the laborers to subsist and to perpetuate their race, without either increase or diminution." Ricardo himself did not give to the " minimum of subsistence " the fixed and rigid meaning which some socialists have attached to it. It varied, he recognized, with the habits and customs of the people. In this more elastic form the " minimum of subsistence " shades into what is termed more accurately the " standard of life." *The number and character of the wants which a man considers more important than marriage and family constitute his standard of life.* Whenever wages fall below a point where the standard of life can be maintained for a family, the workman will do without the family and maintain the standard of life for himself alone. While the increase in the quantity of goods produced that has taken place by reason of the industrial revolution and the utilization of new and vast bodies of natural resources has been attended with an unprecedented increase in population, it has also been attended with an improvement in the standard of living. Every advance in the standard of life marks a step definitely gained in the economic progress of the laboring class; it affords a vantage ground for yet farther progress.

This is not only because the standard of life is, by very definition, a fundamental factor in determining, in the long run, the supply of labor, but also because experience has shown that the standard of life affords an element of strength to laborers in their bargains with employers. Any encroachments on it

are met with strong and determined resistance. Moreover, a high standard of life is, as we have seen, one of the things that make for productive efficiency on the part of the laborer, and hence tend to increase his earning capacity. Many persons who are deeply interested in the welfare of the laboring class believe that the wisest philanthropy is embodied in the efforts that are made to raise the level of living. Among such efforts are included such things as the work of social settlements, public and private movements to secure better conditions of housing, municipal expenditures for places of public recreation, for public libraries, for such things even as clean and well-lighted streets; and, above all, public education.

The extent to which the possibility of attaining a still higher standard of living operates as a restraining force upon the increase of the population is largely determined by the extent to which democratic ideals are realized in the social organization. It is a noticeable fact, for example, that the first generation of immigrants to the United States bring with them the habits and ways of living of their European homes. So long as simple standards of life are retained in connection with the larger incomes which they are able to earn in this country, more of them are able to marry; they are able to marry earlier, and they can raise larger families. But the second generation grows up in an American environment. They attend our public schools, where they mingle with American children and receive an American education. The possibility of taking a social and economic position higher than that of their parents is opened up to them. They become saturated with the American notion that each man has a chance to climb to the top of the ladder. They find here no rigid barriers separating social classes from one another. "Like father, like son" may have been true in Europe; here it has no binding force. Hence the birth rate among our native population of foreign parentage is very much lower than the birth rate among our foreign-born population.

The Supply of Labor in Different Occupations. — Just as the demand for labor on the part of entrepreneurs is not a demand for "labor in general," but a demand for specific kinds of labor, so the supply of labor is the supply of laborers who are able and willing to do certain definite kinds of work. The supply of labor in any given occupation is, at any given time, almost as rigidly fixed as is the supply of labor in general. Laborers can usually change from one occupation to another only at the loss of the advantage of whatever specialized skill they may have acquired.

This is, however, a matter of *occupations*, not of *industries*. There is, for example, a wide range of industries open to a skilled mechanic or a stationary engineer. But in the skilled trades what variability there is in the supply (at any given time) comes less from any possibility of passing from one trade to another than from the opportunities the more efficient and ambitious workmen have of entering business on their own account (that is, of becoming entrepreneurs) or of entering some calling where general ability, rather than specialized skill, is the prime requisite. The carpenter may become a contractor; the skilled mechanic may become a traveling salesman, and this, very likely, in some line where his specialized skill will still be of some advantage. The options thus open to the stronger members of each group should not be lost sight of in any consideration of the forces tending to resist a downward movement in the wages paid in any occupation.

Throughout the greater part of American history the most important option of this kind has been due to the existence of a large body of free land. The mobility of labor in this country has been such that it has been impossible for wages to fall much below the amount which a man could make for himself by taking up government land on the frontier. Today, however, we are confronted by a different set of conditions. The frontier has completed its journey across the continent, and there remains for the settler only such land as irrigation may reclaim from the arid regions of the West. The wage earner will henceforth be without the strong support of the economic alternative of a living got from free land.

When we take the long-period point of view, we find more elasticity in the supply of labor in particular occupations. The ranks of each trade are being continually depleted by old age, death, and, to some extent, by the alternatives open to its stronger members. These gaps need not be filled by an incoming body of apprentices if the wages paid are lower than the wages in other occupations demanding a similar degree of preparation and ability. But there is a certain amount of inelasticity even here, for a variety of reasons, among which we may

note: (1) the habit of imitation, which leads a boy to enter the same occupation his acquaintances have chosen; (2) the not infrequent tendency of sons to enter their father's occupation; (3) lack of knowledge or of early appreciation of the relative advantages of different employments, and (4) the fact that only a small number of options may be open to the residents of a particular territory. These facts, in turn, have an important bearing upon the localization of industry, for industries are apt to be located in places where there is a present and prospective supply of specially skilled labor.

Differences in wages, together with other factors just mentioned, are not, however, the only considerations which attract laborers to different occupations. Many economic writers have observed that there are differences in the wages paid in different employments which are out of all proportion to any differences in the training or the ability they require. Adam Smith enumerated five circumstances which "make up for a small pecuniary gain in some employments, and counterbalance a great one in others." These are: "I. The agreeableness or disagreeableness of the employments themselves; II. The easiness and cheapness, or the difficulty and expense, of learning them; III. The constancy or inconstancy of employment in them; IV. The small or great trust which must be reposed in those who exercise them; and V. The probability or improbability of success in them." These circumstances need explanation in two particulars: First, the agreeableness or disagreeableness of an employment is very often a matter of the social standing attached to it. Many men are doing clerical work to whom some kind of physical exertion would be both more pleasant and more profitable, but who dislike to be classed among the "manual laborers." So-called "professional pursuits" attract many men to whom more lucrative opportunities, requiring less special preparation, are open in other employments. In the second place, the significance of these circumstances is affected by the fact that the most poorly paid (because the least efficient) laborers are found in the most disagreeable and the most uncertain employments.

The Wage Contract. — The wages that a laborer actually receives are determined by an agreement between himself and his employer. Here appear again those " gains of bargaining " which were mentioned in the discussion of the prices of commodities. But in the case of the wage agreement, if the bargain is between an employer and an individual workman, the advantage is likely to be very largely on one side. The employer is apt to know pretty accurately what he can afford to pay the laborer; he knows about how much the laborer will add to his product, and his knowledge of business conditions helps him to estimate the value of this added product. He knows what it would cost him to get his added product in other ways, as by paying some of his present employees for " overtime " work, or possibly by speeding his machinery faster. Moreover, there is the possibility, or even probability, of getting some other laborer, in case he fails to come to an agreement with the one in question. His experience as an employer of laborers will help him to gauge the minimum that the laborer will accept. With the laborer the situation is very different. He can gauge with less accuracy just how much his services are worth to the employer. The minimum wage that he will accept will be governed by his very limited power of holding out for higher wages, or by his estimate of what he can get in other employments — very few of which may be open to him. The whole situation may be expressed by the statement that it is usually a matter of small importance to the employer whether or not he secures a particular laborer, while the securing of a particular employment is often a matter of the very greatest importance to the laborer. Under these conditions wages are apt to be fixed much closer to the minimum which the laborer will take than to the maximum which the employer will pay. Where laborers can bargain in groups rather than as individuals, their disadvantages are greatly lessened. The fundamental motive underlying the development of labor organizations has been to secure the advantages of *collective bargaining*.

QUESTIONS AND EXERCISES

1. How far are wages determined by the productivity of labor? In what different ways do wages affect the productivity of labor? What meaning, or meanings, do you attach to the word "productivity" in the foregoing questions?

2. Why are the wages of men higher than the wages of women in the same employments?

3. Make a short outline, or table, of the factors determining the supply and demand of labor.

4. Are wages paid as a reward for the irksomeness of labor? Are they paid on account of the scarcity of labor?

5. Some economists have held that "a demand for commodities is not a demand for labor." Discuss this statement.

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CHAPTER XXII

LABOR PROBLEMS

Types of Labor Organizations. — There are at least three distinct types of labor organizations: the *Trade Union*, representing a combination of wage earners in a single trade or two or three closely related trades; the *Industrial Union*, composed of all kinds of wage earners working in a given industry; and the mixed *Labor Union*, made up of wage earners from many trades and many industries. Thus, the Brotherhood of Locomotive Engineers, strictly a trade union, makes no attempt to include other workers in the railway service; the United Mine Workers, however, an industrial union, attempts to combine all persons working in and around the mines; while the Knights of Labor, in the period of its strength and prosperity, fused all sorts and conditions of workers in some of its district assemblies, and combined these assemblies in a closely knit, highly centralized national labor union.

The difference in the structure of labor organizations colors their policies and gives rise to important problems. The trade and industrial unions are, as we should expect, much more homogeneous, and therefore much more efficient than the labor unions, but they are likely to be narrower in their aims and more selfish in their policies. The labor unions, on the other hand, have in the past proved much less efficient, much more unwieldy and much more disposed to make use of coöperation, political action, and other devices which are not suited to associations of wage earners, or at least not easily handled by them.

For the larger and more general objects common to wage workers as a body, many of the American unions have combined in a large, loosely knit confederacy, known as the American Federation of Labor. This organization interferes just as little as

possible with the constituent unions, and confines its activity to securing favorable labor laws, organizing trades in districts of the country in which trade unions have heretofore failed to get a start, rendering assistance to unions which are hard pushed in strikes or other disputes with employers, encouraging the use of union-label goods, and, in short, to furthering all those interests which labor organizations have in common. The membership of the American Federation of Labor in 1914 was a little over two millions.

The Economic Justification of Labor Organizations. — The question is often asked why labor organizations are necessary, in view of the fact that wages are fixed, at least within broad limits, by deep-lying economic and social forces which the labor organization cannot effectively control. If wages depend upon demand and supply, it is said, what excuse for the troublesome and irritating trade union?

The answer is in part that economic laws work themselves out through men and through organizations — they are not self-enforcing. We have had labor organizations of one kind and another ever since the wage system existed, and we shall unquestionably continue to have such organizations unless the wage system is superseded by something more satisfactory.

Even if we grant that labor is in essentials a commodity whose price is fixed by demand and supply, there is still a reason for the labor organization. The supply of labor is largely controlled, in the long run, as we have seen, by the standard of life; and one of the great functions of the labor organization is to strengthen and advance the standard of life. If a great horde of unorganized and unsympathetic wage earners are continually bidding against one another in the labor market, each individual endeavoring to get a little more work by offering to take a little less pay, the standard of living will be subtly undermined, "nibbled away," as a well-known writer has expressed it. The labor organization, by repressing the vicious activity of this competition, by compelling its members to offer the same terms and abide by common or standard rules, bulwarks the standard of life, and gives it increased precision, increased power and durability. In

addition, most unions endeavor to exercise a more direct and positive influence upon the supply of labor, by limiting the number of apprentices, helpers, and other persons entering the trade. These efforts, however, are not always successful.

Current economic doctrine recognizes at least one other legitimate function of the labor organization. In an advancing or progressive state of industry there must often be some margin between the price of what the laborer — under direction — produces and the wages he gets for producing it. The employer cannot always pay the worker the whole price of that part of the product which might be imputed to the worker's efforts; if he did, he would, in many cases, have only what, in another chapter, we have called " minimum " profits. By stout resistance and skillful bargaining it is often possible for the wage worker to get a part of that share of the product which would otherwise go to the employer as profits. Of course, that labor organization will be most successful in the long run which increases the productivity of its members, and thus creates a larger product to be distributed among all the factors of production. But even if the organization does not increase the productivity of its members, it has a chance to improve their wages by trenching upon profits. Mere bargaining, therefore, despite the operation of more fundamental economic forces, is still exceedingly important. And the unorganized wage workers, being poor bargainers, combine with their fellow-workmen, not only to maintain a more uniform price for their labor, but in order to procure the guidance and assistance of an expert bargainer — the business agent or walking delegate. The labor organization is thus a commercial institution for the sale of labor in large quantities; its primary function is collective bargaining.

Labor Organizations and Monopoly. — It is plain that the labor organization as a wholesale jobber of labor is essentially a product of those familiar economic forces making for large-scale commercial dealings; it is brother to the trust, akin to the combination, and thus not untainted with monopoly. One of the most searching criticisms directed against the labor organization is that it exhibits all the evil tendencies of monopoly. The

charge has some elements of truth. The ultimate aim of the average labor organization is to induce every worker in the industry to join the union, so that by monopolizing the supply of labor it may control the price. But in its principal implications the charge of monopoly is misleading, because the great majority of unions do not attempt to limit the number of their beneficiaries. They aim to increase wages, but they are willing and even anxious that every member of the craft should share the increase. It is rare for a labor organization to exclude from its ranks a number of workers and then persecute them by refusing to work with them or treating them as scabs. Conflicts with non-union men are common, but in a very large majority of cases every effort has been made to get these men into the union. An organization which is constantly exhorting its competitors to come into the combination and share its benefits is at most an *inclusive monopoly*, and is not to be confused with the *exclusive monopolies* found in the field of business.

Methods and Policies of Labor Organizations. — The aims of labor organizations and the policies employed to achieve their ends vary in accordance with the conditions of the occupation or industry in which their members work. Some unions, for instance, lay great emphasis upon apprenticeship; and if they thus secure control of the supply of labor in the trade, find it necessary to place but little dependence upon strikes and boycotts. On the other hand, organizations like the Brotherhood of Locomotive Engineers find this question settled for them; no one can perform the work of a locomotive engineer without preliminary training, and this natural limitation of the number of trained locomotive engineers makes it possible for their union to get along without maintaining either apprenticeship regulations or the policy of the closed shop.[1] And it rarely places dependence upon the strike. An admirable system of mutual insurance and

[1] The familiar union rule prohibiting members of the union from working with non-union men. The policy is very elastic. No objection is made to working with members of an occupation not yet organized; some unions apply the ban only to non-union men in the same trade or craft; while others practically refuse to work for an employer who hires any non-union men at all (not applying the term "non-union men" to laborers, porters, and other unorganized workers).

simple collective bargaining is usually sufficient to keep the membership loyal and obtain from employers fair rates of pay.

In the unskilled trades, on the other hand, where a period of apprenticeship is wholly superfluous, some more artificial protection of the standard of life is employed, like the " policy of the closed shop " ; and this naturally forces the union, in turn, to place great dependence upon the strike and boycott. Before condemning a union for employing some of these policies, therefore, or contrasting it unfavorably with highly conservative unions, like the railway brotherhoods, it is necessary to inquire whether or not, like the railway brotherhoods, it is protected by some natural condition of the business which makes peaceable collective bargaining comparatively easy.

The Problem of the Closed-Shop Policy. — It is impossible to pass any general verdict upon the justice of the closed-shop policy. Most Americans are inclined to condemn it offhand as an attempt to deprive the non-union man of his " sacred right to work." They forget that the union man enforces the closed-shop policy for an exercise of his " sacred right of quitting work." Except where violence is employed, the union which is attempting to enforce a closed-shop policy threatens to do nothing worse than direct its members to quit the employment of the proprietor of the open shop in question. Two equally " sacred and inalienable rights " clash in this contest, and it is plain that no decision concerning the legitimacy of the closed-shop policy can be determined offhand by applying the touchstone of individual rights. If we would know whether a strike against non-union men is justifiable or unjustifiable, we must inquire into all the surrounding circumstances and the manner in which the strike is conducted. If the strike is conducted peaceably, and if the union in question is an open union, cordially inviting the " scabs " to enter and share its benefits; if the rate of wages and other conditions of employment demanded by the union men are reasonable in view of the cost of living and other similar conditions; if the " scabs " involved, by accepting less than a living wage or other harmful conditions of employment, are working — even though of necessity — to undermine the American standard of living; then we

have no hesitation in saying that the employment of the closed-shop policy on the part of the union is thoroughly justifiable. So far as the law is concerned the Supreme Court of the United States has decided that an employer — perhaps a large corporation — may discharge an employee for belonging to a union, for any reason or for no reason; and a recent act of Congress empowers combinations of workingmen to do in trade disputes anything which they might lawfully do as individuals. The law — or federal law at least — is apparently impartial. But from the standpoint of equity and morals employers frequently discharge men for indefensible reasons and unions frequently attempt to enforce the closed-shop rule for purposes or by methods which deserve to be condemned.

We must not confine our attention wholly to the injury done to the non-union man. The non-union man frequently does a real injury to his fellow-workers by accepting wages or other conditions of employment that are inconsistent with the American mode of living. The price cutter in the labor market is not ordinarily a social benefactor. The weakest, dullest, and least enterprising laborer exerts an influence upon the general level of wages out of all proportion to his importance or his deserts. If this be true, the man who cuts the standard rate of wages may do a grave social injury, and there is justification for those who peaceably combine to prevent him from doing his destructive work. It must be remembered, however, that these conclusions are based upon the assumption that the union is an open union and that the strike is conducted without intimidation or interference with the non-union men. The moment the union stoops to violence, that moment it loses all claim to the support of an enlightened public opinion.

Limitation of Output. — Another policy which is generally, and in many cases unjustly, condemned is the regulation of output, systematically practiced and indorsed by most unions. The output of the worker is limited in many ways. The reduction of the hours of labor, the limitation of wages which some unions working by the piece system enforce, the prohibition or penalization of overtime, all operate to check the activity or

reduce the output of the particular workman. Here, again, it is unsafe to render any general verdict upon the legitimacy of the policy in question. In some industries in which the piece system is employed, the rate per piece has unquestionably been forced down and the workers spurred to excessive exertion by the pressure and influence of pacemakers or taskmasters, paid by the employers to urge the workers to the utmost speed. Where such conditions prevail, no one can successfully question the justice of the feeling which leads the union to object to the presence of pacemakers and to prescribe a maximum wage — usually above that secured by the average workman — which union members are not permitted to exceed. In general, it is plain that an individual laborer may underbid a competitor by working more intensely, as well as by offering to work longer hours or at lower pay. On this account alone, trade unions are justified in defining and maintaining some regular pace or standard intensity of work. Without such definition, collective bargaining would be impossible. This last observation, it will be noted, applies only to trades working by the day. But even where the piece system is used, the workers may be justified in fixing a liberal limit to the amount of piecework which the wage earner shall be permitted to do in a day. For there can be no question that unregulated piecework does stimulate the worker to excessive exertion, and that as daily earnings under the piece system tend to rise, the employer is tempted to reduce the rates.

Some methods of restriction, however, are wholly vicious. The Journeyman Stone Cutters' Union, for instance, stoutly resisted for years the application of machinery to their work, and actually attempted to prevent the shipment of machine-planed stone into any city where the union had succeeded in preventing the introduction of planers. Such an attitude toward the introduction of labor-saving devices deserves the severest condemnation. Moreover, in some unions there is a tacit approval of the "go-easy" system, the system of "soldiering," or "adulterating labor," as it has been aptly termed. Such a method of restricting output not only corrupts the character of the individual workman who practices it, but makes it impossible for

the employer to deal with the union as a seller of honest goods, and in this way tends to undermine the whole foundation of trade unionism, which is, as has been said, collective bargaining. On the other hand, there is no particular reason to believe that union labor is especially given to " go-easy " habits of work. The habit of stealthy loafing is found at its worst in certain unorganized trades or occupations, so that when it appears among union workmen it cannot logically be attributed to organization alone.

Educational and Fraternal Activities. — Practically all unions have important educational and social activities. Debate upon economic topics is common in union meetings, particularly at the conventions of the state and national organizations. It has even been said by observers in close contact with the facts that foreign-born wage earners receive their most helpful and vital education in American public questions through the agency of the union. This broad education, which is a most important factor in elevating the standard of life, is supplemented by the social activities of the labor organization. Many unions maintain a so-called " Ladies' Auxiliary," in which the wives of the members participate; give concerts, dances, and other social entertainments, maintain charitable activities, and by general social intercourse operate to unify and solidify the standard of life of the wage-earning group concerned.

Closely allied with these educational and social features is the system of insurance benefits, which has played a very prominent part in the development of labor organizations. In Great Britain fully three times as much money is expended by the unions upon mutual insurance of various kinds as upon administrative activities, or for the support and encouragement of strikes. Union insurance is helpful, not only in stimulating thrift among the individual members, but in making the union more careful and conservative in its policies. Moreover, it serves to keep in the union a large number of members, who, if they had no financial stake in continued membership, would drop out of the union in times of peace, when no apparent advantage was to be derived from the union. All things considered, the Cigar

Makers' International Union has many claims to be considered the most successful American labor organization; and its success is in a large degree, if not in the largest degree, attributable to its wise and extensive use of mutual insurance. But on the whole, the American unions make relatively little use of the insurance benefit. Most of them pay strike benefits, — that is part of their fighting policy, — and perhaps a majority of them pay funeral benefits, while a respectable majority pay sick benefits. But the employment of the superannuation, accident, traveling, or " out-of-work " benefit is comparatively rare. The great majority of American unions are militant in character, existing primarily for the purpose of collective bargaining, and placing the greatest reliance upon the policy of the closed shop and the strike.

The Strike. — Probably the most important weapon of the trade union is the strike. Unfortunately, also, the weapon is far too frequently used. Several generations ago most trade unions, while they vehemently defended their right to strike, cordially indorsed arbitration and apparently looked upon the strike as a weapon of last resort. Today, the average trade union is at best only a lukewarm advocate of arbitration, while it has come to regard striking as a permanent policy. The net result has been to commercialize the strike, as it were. Instead of being a more or less spontaneous outburst against conditions which the workingman regarded as unrighteous and oppressive, the strike has come to be a commonplace method of bettering conditions of employment; a device to be employed when conditions are favorable, to be laid aside when conditions are unfavorable, but to be used without regard to ethical consideration when its use appears to be profitable.

The statistics of strikes published in the *Twenty-first Annual Report* of the (United States) Commissioner of Labor, in the recurrent reports on strikes and lockouts of the Massachusetts Bureau of Labor Statistics, and in similar reports of other state labor bureaus, indicate that strikes are steadily increasing in the United States. Moreover, comparison of the number of employees thrown out of work with the general wage-earning population indicates, although not so certainly, that the proportion of workingmen annually involved in strikes has been slowly increasing. Precisely what is responsible

for this increase in strikes is difficult to determine. The change in the attitude of labor organizations toward the strike is an important factor, no doubt. But the greatest reason for the increase, in all probability, is the rapid growth of organized labor. New unions are prone to strike. The sudden realization of their new power, and the accumulation of strike funds, tempt them to try their wings. In the long run organization probably exerts a conservative and steadying influence: national machinery is created which curbs the capricious impulses of the local unions; experienced men are usually elected to the more important national offices, and when they are called in to settle a local grievance, they arrive upon the scene of action without personal resentment against the employers involved. These facts create a strong hope, and, indeed, a confident belief, among many of those who have studied the labor question, that when practically all American trades are organized, strikes will steadily decrease, as they have in England, where a much larger part of the wage-earning population is organized than in this country.

Labor leaders maintain that strikes strengthen the solidarity of the unions, and encourage the members to make personal sacrifices for the common good, while they force employers to respect the strength of organized labor, and are not, in the long run, particularly costly. The time lost in strikes, they say, largely takes the place of enforced vacations — seasonal stoppages, and other kinds of unemployment with which the average wage earner is normally visited during the course of the year's work. No amount of such dialectic, however, can argue out of existence the injury and destruction resulting from strikes. Many strikes are gravely injurious to the wage earners themselves; and almost all strikes injure employers and the consuming public. From the social standpoint the strike is an evil, and all justifiable means should be employed to prevent its occurrence.

We must not conclude, however, that workingmen and labor organizations are wholly responsible for strikes. If a body of men agree not to work for a given employer unless that employer complies with certain conditions, whose fault is it if the employer refuses to comply and a strike follows? Very evidently the fault may lie with either the master or the men, or with both. The fault lies with the men if the conditions which they demand are, in view of all the circumstances, unreasonable and extortionate. The fault lies with the employer if he refuses to grant

reasonable conditions of employment. Sometimes the fault is with one, sometimes with the other; sometimes the one gains by the strike, sometimes the other; but the public, which is never at fault, stands always to lose. The greatest lesson to be derived from a consideration of strikes is the necessity of their suppression in the interest of the general public.

One of the greatest evils attendant upon the strike is violence emanating from both sides, — from employers' associations as well as from labor unions. It is frequently said that this is diminishing with the passage of years. The statement is both true and untrue. A study of labor disputes in the early period of the modern labor movement seems to show that the average strike of that period was attended with much more violence than the average strike of today. Most labor leaders have thoroughly learned the lesson that violence does not pay, and they exert every effort to suppress it. But at the same time the average strike of the present time is attended with some violence or coercion, and the steady increase in the number of strikes makes the aggregate amount of violence now greater than it was in the past.

Historically, also, a marked change has shown itself in the character of the violence employed. In the past, labor lawlessness was more or less sporadic; brutal, it is true, but frank and unpremeditated. The lawlessness of today, however, has taken on a far more sinister form; it has become deliberate, premeditated, in many cases official. The outrages perpetrated by the officers of the International Union of Bridge and Structural Ironworkers (the "dynamite conspiracy") and the whole labor history of the mining industry in Colorado and Idaho make it plain that there has been a certain amount of carefully planned violence perpetrated with the passive consent, if not with the active encouragement, of union officials and members. There can be no doubt, also, that individual employers and employers' associations have stooped to equally reprehensible practices. They have employed as watchmen or detectives ex-convicts, thugs, and professional bad men, who unquestionably have not refrained at times from perpetrating violence in order to cast discredit upon the unions. It is impossible to conclude which side is the more to blame. The lesson to be drawn is the public necessity of suppressing and punishing violence or intimidation when practiced by either side of the controversy.

Employers' Associations. — The development of modern employers' associations has been briefly described in an earlier chapter. Their activities give rise to a movement which may be briefly described as an anti-labor movement. They are, in almost every respect, the natural foil and counterpoise of the labor organization. They resemble the association of laborers

even in structure. Thus we have had employers' associations recruited entirely from one industry, such as the Stove Founders' National Defense Association; associations of employers in distinct but related industries, such as the national Metal Trade Association; and mixed associations in which all kinds of employers are united, such as the Citizens' Alliances, so common a few years ago in many of the Western cities. To complete the analogy, these associations frequently combined in city, state, and national federations; thus forming large confederacies, similar in scope and activity to the state and national federation of labor. Speaking generally, employers' associations show less permanence than trade unions and many of the employers' associations which were active a decade ago are now moribund.

We find the same resemblances between employers' associations and labor organizations when we examine the policies and aims of the former. Thus they make frequent use of the lockout. The Stove Founders' National Defense Association, for example, began its interesting career with a lockout of the iron molders in the employ of its members. Like the trade unions, also, they have their legislative committees or lobbies, and are credited, for instance, with having played an important part in defeating the eight-hour and anti-injunction bills which have been before Congress several times. Some of these organizations also maintain so-called labor bureaus, whose function it is to secure accurate information of the workmen in the trade, so that troublesome agitators may be refused employment; and the methods employed in this branch of the work give rise to something closely akin to the "unfair list" published by many national unions. Some of the more radical associations have stooped at times to violence and coercion, as was illustrated in 1904 by the employers' associations of the Cripple Creek district which boycotted business firms, forced public officials to resign by threats or violence, and filled the vacant places with their own adherents.

Some of the employers' associations are conservative in tone and policy, working harmoniously with the labor organizations in the industry, and going no farther than to endeavor by every

legitimate measure to further the interest of the affiliated employers. Such associations are exceedingly helpful in furthering that régime of peaceable collective bargaining to which most students of this subject look forward as the ultimate outcome of present-day tendencies. They are thus doing in an effective way the work of industrial peace. Another group, however, while temperate in tone and waging no warfare on the labor organization as such, nevertheless maintain certain fundamental principles which are directly in conflict with the fundamental tenets of trade unionism. These associations, for instance, maintain that the method of wage payment — *i.e.* whether wages shall be reckoned by the hour, the piece, or the premium system — is a matter which concerns the employer alone, and they refuse to submit such questions to collective bargaining or arbitration. Associations in this second group do not needlessly foment strifes with the unions, but they regard industrial peace as a consideration secondary to the maintenance of their fundamental principles, and accordingly they have been involved in a number of protracted strikes and disputes. Finally, there is a third group of employers' associations, of which the average citizens' alliance is a good example, which may be correctly described as "union smashers." Such associations have little regard for the establishment of sound principles of collective bargaining, and they are usually violently opposed to any recognition of organized labor; their aim is to weaken and harass their enemy, the labor organization, whenever possible. They represent among employers something of the same feeling and attitude which characterize the Industrial Workers of the World (a syndicalist organization opposed to trade agreements, trade unionism, and even to socialism; placing its reliance upon the strike, direct action, and sabotage). The extremely radical organizations on both sides secure, by reason of their revolutionary utterances and tactics, far more attention than their intrinsic importance justifies.

Owing to this difference of policy among the various employers' associations, it is difficult to predict how the anti-labor movement will affect that question in which the public interest is

greatest — the question of industrial peace. For some little time, perhaps, the militant enthusiasm of the more belligerent associations will probably result in multiplying strikes and lockouts. In the end, however, they will probably contribute effectively to the maintenance of industrial peace by checking the more extortionate demands of the unions and by securing that degree of organization among employers which is necessary for the successful operation of collective bargaining. If wage earners are to act in concert by common or standard rules, it is evident that eventually they will have to deal with an organized body of employers; and the sooner such organization of employers is perfected, the sooner will collective bargaining be established as the regular method of determining conditions of employment.

The Agencies of Industrial Peace. — Although collective bargaining does not necessarily and in every instance operate to discourage strikes, its net influence is unquestionably favorable to the maintenance of industrial peace. Where a powerful trade union exists, and the employers resolutely refuse to deal with it, strikes are frequent. Where the opposite policy is pursued, and the employers frankly recognize the union, strikes are infrequent. In the bituminous mining industry of the East, among steam railway employees in the train service, in the needle trades of New York, and in many of the industries of England, strong organizations of employers and employees have shown through collective bargaining the power to maintain industrial peace for long periods of time.

Trade Arbitration. — In England, many, if not most, of the wider systems of collective bargaining are based upon formal treaties, which provide for arbitration in case the two parties cannot come to an agreement concerning terms. This is frequently referred to as *trade arbitration*. But in the United States many of the general conferences are based upon agreements which do not provide for arbitration at all. Peace is maintained, although neither side promises in any way to refrain from strikes or lockouts. Mutual respect and free discussion prevent actual warfare. Indeed, many authorities upon this

subject are inclined to think that the introduction of arbitration, even as a last resort, weakens the efficiency of collective bargaining. It is almost always necessary for both sides in collective bargaining to make some compromises; and this necessity imposes upon the representatives of the trade unions the disagreeable duty of reporting to their constituents that they have not secured the exact terms which they were instructed in the beginning to demand. Because of this fact, if a provision for arbitration exists, the union representatives are disposed to throw the responsibility of disappointing their followers upon the shoulders of the arbitrators.

Moreover, collective bargaining is essentially inconsistent with arbitration. Collective bargaining is commercial and elastic; it deals with the formulation of future terms of employment; it looks to securing the best results possible; it has no rational foundation save the willingness of the parties concerned to get the most possible for their labor or their money, as the case may be; whereas arbitration is judicial in essence, and its successful application implies the acceptance of some established principle of wage adjustment, in the justice of which both parties acquiesce. It is unfortunate but true that up to the present time no one has ever formulated a doctrine of wage adjustment which is at once workable and acceptable to a majority of the people. Arbitration is a perfectly logical device, and works successfully in the interpretation of minor difficulties growing out of a broad agreement which has already been accepted. Or, if both sides adopt some governing principle, it is perfectly possible for a disinterested arbitrator to decide what this principle demands in a given situation. But as a helpful device in securing the initial adoption of a fundamental agreement, mediation is superior to trade arbitration, although the latter appeals to the employers because it promises to prevent stoppage of work pending the decision of disputes.

Voluntary Arbitration. —There are, of course, many other kinds of arbitration which have proved helpful in maintaining the industrial peace. Most advanced states now maintain boards of conciliation and arbitration, whose business it is to

prevent strikes if possible, and to adjust or settle them after they occur. For the most part, these voluntary boards of conciliation and arbitration have shown little ability to cope with the real situation. Much more, however, could be made of voluntary conciliation and arbitration than has been made in the past. The short but very promising history of the Canadian Industrial Disputes Investigation Act of 1907 suggests that a law which, like the Canadian Act, forbade strikes and lockouts in important industries until an impartial board of conciliators had had time to investigate the dispute and publish their recommendations and findings concerning the equities of the case, would go far toward delivering us from the more injurious industrial conflicts. The vital provisions of such a method of conciliation are: (1) the prohibition of strikes and lockouts before and during the investigation; (2) widespread publication of the findings of the board of investigation and conciliation; and (3) full permission to strike or lockout after the publication of the findings.

Compulsory Arbitration. — In New Zealand an even more radical remedy — " compulsory arbitration " — has been tried. Seven workingmen in any industry may organize a union and lodge a demand for better conditions of employment before arbitration boards, whose decisions, when ratified by the supreme or central court of arbitration, are absolute and binding. Similarly, any employer whose workmen are organized in a union may take a case to the arbitration tribunals for settlement. An award of the central court of arbitration may be extended by the court to all competitors of the original employer in the colony. In this way, compulsory arbitration brings about the introduction of minimum wages and other conditions of employment, *established by the authority of the state* and enforced, not only by the watchful eyes of the parties concerned, but by the factory inspectors themselves. In Victoria and South Australia much the same results are reached through the agency of wage boards — containing representatives of both the employers and their employees, with a chairman selected by these representatives or appointed by the government — which are empowered to pre-

scribe minimum wages and other conditions of employment, that are enforced, as in New Zealand, by the factory inspectors. Strikes, however, are not prohibited under this system, although they are very rare in industries in which wage boards regulate wages and hours of labor.

It is impossible to enter into a detailed discussion of either the New Zealand or the Victoria system at this place. Both systems have been in operation since 1896, both have been extended to other Australian colonies. The laws recently adopted in New South Wales, South Australia, and Queensland contain the principal features of both systems. The fixing of minimum conditions of employment is perhaps the most important element in both systems, but it is noteworthy that the compulsory arbitration idea has endured and spread. Strikes are not wholly prevented, particularly in industries in which the labor organizations are very strong; and many employers criticize both systems vehemently. With the passage of time, however, they have been strengthened, not repealed; and the consensus of qualified opinion seems to be that they have succeeded. But there is little probability that general compulsory arbitration will be introduced into this country in the near future. It would in all probability be held to conflict with state and federal constitutions, and, moreover, a large majority of trade unionists are opposed to it.

The Ultimate Solution. — In arriving at a decision concerning the measures which ought to be taken to maintain industrial peace, it should be remembered that strikes are much more destructive and dangerous in some industries than in others, and that here, as in most other economic problems, it is dangerous to proceed wholly on the basis of general principles. In most industries, in our opinion, the strike question may safely be left to the enlightened self-interest of the parties concerned, trusting to collective bargaining and the work of voluntary arbitration to prevent an excessive amount of war. In small competitive industries the peaceful strike is not necessarily an alarming phenomenon.

Slowly and surely, however, the opinion is gathering force that

in those industries which vitally touch the public welfare (such as the anthracite coal industry, railway transportation, and the like) the public should, and by an exercise of legal ingenuity might, find means to preserve the peace whether the two parties immediately concerned desire peace or not. Compulsory arbitration in competitive industries would unquestionably be unconstitutional in this country. But with quasi-public industries, "industries affected by a public interest," the question is entirely different. If, because of their monopolistic character and their intimate connection with the convenience of the public, the legislature may regulate the service and the rates of such industries, it would seem to follow even more clearly that the legislature may adopt any measure necessary to prevent the utter cessation of such industries by strikes and lockouts. If, for instance, the fare charged by a street railway may be regulated by the state, in order to prevent monopolistic extortion, how much more justifiable would be the action of the state in preventing the complete interruption of the traffic of the railway by means of a strike or lockout! The federal government in the Erdman and Newlands Acts provides machinery for mediation and arbitration in disputes affecting interstate railways. Many important disputes which threatened widely to interrupt interstate commerce have been settled by mediation — and a few very important disputes by arbitration — under these laws. Many threatened strikes by employees in the train service have been prevented; and it is interesting to observe that with the passage of time more use is made of arbitration, and that under certain circumstances the arbitrators are permitted to make binding awards. Compulsory arbitration or public regulation of wages in the railway and other industries affected with a public use is, we believe, an inevitable concomitant of the public regulation of prices and profits in these fields.

Profit Sharing. — Profit sharing attempts, not to provide a remedy for industrial disputes, but to anticipate and prevent them by assigning to the employees a share of the profits fixed in advance. It is held that this arrangement enlists the employees' interest in the success of the business, makes them more

economical, and so increases their zeal and efficiency that the share of profits which they receive does not reduce in the long run the earnings of the employer. In other words, the employees create the fund from which their bonus is paid. This bonus may be paid in many different ways: either in cash at the end of the business year, or in shares of stock in the company in question, thus making the workman partial owner of the business; or it may be amassed in a savings or insurance fund, from which in his old age the workman receives a pension, or his family an annuity or cash premium at the time of his death. The last method of profit sharing is usually spoken of as "deferred participation."

Neither historical study nor theoretical analysis of profit sharing furnishes reasonable ground for the belief that this method of industrial remuneration will ever play an important part in solving the modern labor problem. Informal profit sharing is probably very old; and the principle or theory was recognized by the French economist and statesman, Turgot, as early as 1775. In 1842 the celebrated French firm of Leclaire• inaugurated a system of profit sharing which has been permanently successful. In the third quarter of the nineteenth century profit sharing was widely discussed. In 1878 a hundred and twenty instances were known, and the number grew steadily until about 1896, since which time the relative importance of profit sharing as a method of industrial remuneration seems to have declined, notwithstanding the wide publicity which has been given to the profit-sharing plans of the United States Steel Corporation and the Ford Motor Company.

The reasons why profit sharing has not proved more successful are various. In the first place, it has incurred the enmity of most labor leaders, who oppose it because it has often been introduced after a disastrous strike as an antidote to trade unionism, and because they believe that it stimulates the men to work beyond their strength, and eventually results — as overspeeding always results — in reduced wages.

In the second place, it is illogical and inconsistent as explained by most of its advocates. The latter assert that the workmen

create the fund from which their dividends are paid by increased care, zeal, and speed. If this be true, and the system can hardly prove a permanent success unless it is true, the end which profit sharing seeks would be better achieved by the piece rate or gain sharing methods of wage payment. By both of these methods the worker gets his premium for extra zeal and efficiency as part of his wage, not as a gift; gets it on pay day, not at the end of the year; and feels as free to bargain and higgle about the size of the premium as he does about the size of the wage. Moreover, his premium cannot be dissipated by unwise management or dishonesty on the part of the employer, and it cannot be lost by reason of his death, discharge, or change of employment.

Profit sharing is too often applied in an unbusinesslike way that smacks of philanthropy. The average employer consciously or unconsciously expects something in return for the dividends which he distributes. And if he does expect a return, it is far better that he should pay for it by a method which is certain, fixed by contract or bargain in advance, and paid, not at long intervals, during which it is threatened by the varying fortunes of the business, but at the end of the week or month when ordinary wages are paid. Of course, if in addition to fair wages the employer wishes to distribute a gratuitous dividend at the end of the year, for which he expects nothing in return, the employee is not likely to object, and the generosity of the employer will probably do no harm. But such a system of profit sharing cannot be expected to become prevalent throughout a competitive commercial system in which most employers cannot be philanthropists, even if they desire. Moreover, human nature is so constituted that gifts of this kind create in the mind of the giver an inevitable expectation of recompense.

Industrial Democracy. — The industrial organization of the past was despotic. The despotic principle, the one-man power, is an excellent thing in its own time and place. It gives to industry the elasticity, celerity, and general efficiency which come from singleness of aim; and in industry, despotism has continued longer than in the political sphere. But it is merely a phase of development and cannot be regarded as final. Else-

where the despotic principle has been softened or limited, — in politics, in religion, in the family, — and eventually this discordant element is bound to disappear or undergo serious modification in industry. The labor movement is primarily a concerted effort to achieve *industrial democracy*, which means self-rule, self-control, the self-direction of the masses in their efforts to gain a livelihood. It is principally because profit sharing means a departure from, and not an approach toward, industrial democracy that it has made so little progress, comparatively speaking, in the last fifty years. A far more consistent method of securing self-government is found in coöperation.

Coöperation is of two kinds, coercive and voluntary. Coercive coöperation, which implies a partial or complete application of socialism, is discussed in another chapter.

Voluntary coöperation takes many different forms, among which we may distinguish: (1) distributive or consumers' coöperation, sometimes spoken of as coöperative buying; (2) coöperative borrowing or coöperative credit; (3) coöperative marketing; and (4) producers' or pure coöperation.

Consumers' or distributive coöperation has no necessary connection with the transportation of goods, but refers merely to a method of retail or wholesale exchange. Purchasers of groceries, dry goods, and the like come together to purchase what they need, and thus eliminate profits. They form a stock company, subscribe for shares, employ a manager and clerks, — who often do not even share in the profits, — and start a business. Dividends are sometimes paid only on shares, but the approved way is to pay a moderate interest on the investment and to divide profits among the customers in proportion to purchases, the division being made at the end of stated intervals. Usually a larger dividend is distributed to shareholders than to ordinary customers; and in some cases the employees receive as large a bonus as the shareholders. Profits are thus said to be divided among capital, custom, and labor. But so far as labor is concerned, the most that can be said is that it receives a small share of the earnings; labor does not coöperate in the sense that it has an important voice in the management of the business. The scheme

is one of distributive coöperation plus profit sharing, not one of pure coöperation.

Coöperative credit and coöperative marketing are familiar phenomena in the United States: the first in the form of the well-known building and loan association; the second in the form of fruit growers' associations, coöperative elevator companies, and the like, formed for the purpose of securing better terms and facilities from railroads, commission houses, and middlemen in general. In 1912, for instance, there were 6300 building and loan associations in the United States, with a membership of 2,500,000 and total assets of $1,138,000,000. At the same time there were many coöperative telephone companies, particularly in small towns and rural districts.

The good which these coöperative associations have accomplished is enormous, and there can be no doubt of their practicability. They have not only proved commercially profitable to the participators, but they have trained them to " team work " and inculcated the spirit of mutual concession, the give and take of concerted endeavor, which makes for social solidarity and constitutes such an indispensable element of good citizenship in a democratic state.

But they have done little and promise to do little in solving the labor problem or in essentially improving the distribution of wealth. They are, for the most part, composed of small capitalists, farmers, or salaried men (not wage earners), and in organization differ little from democratically managed stock companies of the usual type. Many, if not most, of the marketing associations are profit-making concerns whose employees have no more voice in the selection of their bosses, and no more share in the management of the business, than the employees of an ordinary corporation. Even in the British coöperative societies the employees have no share in the management, and though some of the associations — notably the Scottish Wholesale Society — indulge in a mild species of profit sharing with their employees, the result is not industrial democracy, not self-government, but merely joint buying plus a paternalistic scheme of profit sharing. The limits of the success of the British coöperative movement

are suggested by the fact that the employees of the coöperative societies have formed themselves into a trade union for the betterment of their condition of employment.[1]

While consumers' coöperation and coöperative marketing — both designed to abolish the profits of the middleman — are important and praiseworthy forms of economic association, they have little effect upon the wage-earning classes, and offer no remedy for the antagonism between capital and labor in manufacturing industries. The variety of coöperation which really copes with these questions and seriously attempts to regenerate the wage system is *producers' coöperation*. The essential features of this form of coöperation are (1) that each group of workers is to be associated by their own free choice; (2) that these associates shall work under a leader elected and removable by themselves; and (3) that the collective remuneration of the labor performed by the group shall be divided among all its members (including the leader) in such a manner as shall be arranged, upon principles recognized as equitable by the society themselves.[2]

Successful coöperative experiments fulfilling the above conditions are seldom met with. But they are not unknown. Here and there a man of transcendent commercial genius and extraordinary sympathy has succeeded in democratizing his business, turning it over to his employees, and so impressing his spirit and his methods upon his successors that the business continues to prosper under the régime of self-government. An illustration is found in the *Godin Familistère* of Guise, France, which, beginning with a scheme of profit sharing in 1877, has finally resulted in the establishment not only of a coöperative manufacturing enterprise, but in the successful conduct of what practically amounts to a coöperative community.

But such cases are rare. Most experiments in producers' cooperation have failed, and we fear they must continue to fail. They apparently cannot meet the competition of businesses

[1] For an account of some of the advantages of certain types of coöperative marketing, see Chap. xxix (*Agricultural Problems*).

[2] D. F. Schloss, *Methods of Industrial Remuneration*, p. 228.

organized in the ordinary way, directed by one man or set of men with all the efficiency, mobility, and adaptability that come from singleness of aim and undivided management. Industrial democracy, as achieved in the coöperative form of industrial organization, is too unwieldy, too slow, too mechanical. Multitudinous management means relatively uncertain, indecisive, and inefficient management.

A modified form of producers' coöperation is not unknown among the manufacturing industries of this country. An approximate idea of the extent of this form of industrial organization may be gathered from recent census statistics. In 1909 the statistics of manufactures relating to character of ownership show a separate class of "miscellaneous business organizations" which consists almost entirely of coöperative manufacturing concerns. There were in this group 4120 establishments (constituting 1.5 per cent of all manufacturing establishments) employing 12,934 persons (0.2 per cent of all wage earners), producing goods with an annual value of $104,766,104 (0.5 per cent of the aggregate product). Most of these associations are coöperative creameries; and it is interesting to note that in this great industry — which was coöperative in origin — the corporate form of organization increases in importance, measured by value of products, more rapidly than the coöperative form. These figures furnish a maximum estimate of producers' coöperation in the United States, and a large majority of the concerns credited to coöperation in this enumeration would fail to satisfy a strict definition of producers' coöperation.

The wage contract, whatever its defects, has one striking virtue — certainty. The wage earner knows what to expect and gets what he expects. He is safeguarded in large measure against business risk, and although he may pay too high a price for his safety, the safety itself is a highly desirable thing. It is one of the weaknesses of producers' coöperation that the workman is encouraged to invest his savings in the hazardous competitive experiments in which he is engaged. He becomes part owner of the enterprise, to be sure, but by doing so he assumes the risk of failure, a risk which, other things being equal, it is desirable to eliminate. It is very likely that the ultimate method by which industrial democracy is achieved will retain that feature of the present wage system by which most of the workers are largely safeguarded against business losses.

The Future of the Union. — If industrial democracy is to be achieved, all present indications are that it will be through the labor organization. Since the introduction of collective bargaining, its range has constantly widened. Beginning with questions of wages, hours of labor, and apprenticeship, it has gradually spread, until at the present time some unions bargain about the sanitary conditions of the work, the introduction of safety devices, the employment of women, the use of machinery, and the status of the men with whom their members work. A few powerful unions insist that the foremen under whom their members work shall belong to the union, demand a voice in the discharge of employees, and try to force the employer, when taking on new men, to select them in order from lists of unemployed journeymen prepared by the union. These demands, of course, may be harmful: in industry as in government, certain functions must be entrusted almost wholly to the executive head. The fact that power may be abused, however, is really beside the point. The point lies in the possibility of extending the range of collective bargaining until the employees shall have a voice — and it is to be hoped a prevailing voice — in determining the conditions of employment. Through collective bargaining the control of the employees over the business may be indefinitely expanded. Once having secured control, the majority may learn, as they are slowly learning in political life, to leave certain particularly difficult questions to their industrial captains. In the past, labor has had to seek capital and serve it. In the future, capital may have to seek and serve labor.

These words are written in no spirit of advocacy, and with no intention of palliating the obvious shortcomings of the trade union. But the fact remains — whether we like it or not — that economic theory and economic history unite in the conclusion that the union has come to stay as long as the system of capitalistic production. The union must be improved, it cannot be extirpated; and the most urgent task of the present is to convince employers and unionists that there will be no real peace until employers acknowledge the inevitableness of the union, and unions acknowledge — sympathetically and in practical

ways — the social serviceableness of the employer. Trade unions have been guilty of many sins — violence, monopoly, political corruption. But their gravest danger at the present time is a false philosophy, in accordance with which many unionists have come to believe that the best way to help the union is to oppose the employer. This is not true of the more wisely conducted unions. The railway brotherhoods frequently unite with the railway managers in securing legislation favorable to the railway industry; and the history of the National Civic Federation, for example, proves that a number of the opposing leaders are keenly aware that capital and labor have interests in common as well as in opposition. In some way, however, united labor as a whole must learn how to drive just as favorable a bargain as possible with the employers in the first instance, and then, the bargain having been made, to bend every effort in loyal coöperation with the employer to make the business the greatest possible success. This is not mere platitude. In the long run, the institution that stands in the way of productive efficiency will perish. The trade union must bring into industry something besides conflict, or it will disappear. The union that so conducts itself as to make the non-union man or the non-union shop more efficient than the union man or the union shop, simply puts a premium upon the suppression of unionism.

QUESTIONS

1. Is the industrial or the trade union the more logical form of organization? Can the two be reconciled? Mention as many kinds of jurisdiction disputes as you can.

2. Does the trade union rest upon a sound economic basis? Is it likely to endure? Is it in any large degree responsible for the conflict between labor and capital?

3. Are all attempts to achieve a monopoly illegitimate? Is there more justification for labor monopolies than industrial monopolies?

4. Is the policy of the closed shop ever justifiable? Intimidation of non-union men? restriction of apprenticeship? regulation of output?

5. The strike has been defined as a "concerted cessation of work"; is this definition correct? Have men a "right" to strike whenever they wish? Are employers justified in "locking out" their men at pleasure?

6. Is the "blacklist" more justifiable than the boycott? Can either the "blacklist" or the boycott be conducted in a lawful manner?

7. Distinguish between trade arbitration, voluntary arbitration, compulsory investigation, and compulsory arbitration. What are the defects of arbitration as a method of settling labor disputes?

8. What is the difference between the Victorian (wage-board) and the New Zealand (compulsory arbitration) systems?

9. Why do labor leaders oppose compulsory arbitration? Is their opposition a sufficient reason for rejecting it? Why is the plea for compulsory arbitration particularly strong in the case of monopolistic industries?

10. How does "gain sharing" differ from "profit sharing"? Is profit sharing necessarily paternalistic? If so, is this a defect?

11. Does consumers' coöperation materially advance industrial democracy? Is producers' coöperation likely to grow and expand?

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CHAPTER XXIII

LABOR LEGISLATION

The conditions of employment may be fixed by individual bargaining between the employer and employee, by collective bargaining between the employer and groups of employees, or by the State itself through legislative enactment. The last method has in recent years been used not only with increasing frequency, but for a variety of purposes which it is desirable to differentiate. In the beginning of the nineteenth century, for instance, combinations of workmen to improve their conditions of employment were unlawful. There was obvious necessity for labor laws, therefore, to legalize combination and make collective bargaining legitimate. But certain classes, particularly women and child wage workers, have found it nearly impossible to organize for collective bargaining. In their case the state has entered upon a program of positive protection, acting so far as children are concerned *in loco parentis*. Adult men, with their trade unions, have been left very largely to take care of themselves; but trade unions, occupied with the absorbing questions of wages and hours of labor, frequently show marked indifference towards certain conditions of employment, such as safety and sanitation, which from the public standpoint are highly important. Of these conditions the public in its own interest has been forced to take cognizance. Finally, legislative enactments have been used both to foster thrift, thus placing the workman in a better position to protect his own interests, and to maintain uniform conditions of employment, so that industry shall be conducted under uniform rules. To most employers, for instance, it makes very little difference whether they are permitted to hire children under fourteen

years of age or not; but it is very important to them that they should not be bound by more onerous restrictions than are imposed upon their competitors. From this and some other standpoints, the universality and rigidity of the labor law are virtues: the stricter its enforcement and the wider the area of competition to which it applies, the better.

Freedom of Contract, Conspiracy, and Injunctions. — In the early part of the nineteenth century, peaceable combinations of workmen to better the conditions of employment were illegal both in England and the United States. Before the middle of the nineteenth century, however, our higher courts had established the doctrine that workingmen might peaceably combine to secure higher wages, reduce hours, or improve shop and other conditions of employment immediately affecting themselves. The trade union acquired a lawful status. But it must not be supposed that in the United States this freedom was or is complete. Workmen might combine to secure higher wages, and might enforce their demands by striking, but in most jurisdictions they could not lawfully combine to secure the discharge of a non-union man, nor could they threaten in concert to quit dealings with a merchant unless he should refuse to buy goods from some manufacturer against whom these workmen or their friends were striking. Moreover, the movement towards complete freedom was blocked or delayed in the last quarter of the nineteenth century by the widespread adoption of anti-trust laws, prohibiting combinations in restraint of trade. Many of the customary activities of trade unions, such as strikes to enforce the closed-shop rule, publication of "unfair lists," and the like, are regarded in some jurisdictions as restraints of trade. The anti-trust laws thus threw a cloud upon the whole trade union movement. Finally the whole situation was complicated and embittered by a doubtful use of the injunction and by the uncertainty of the law itself. Statutes differ, and the interpretations of similar statutes by different courts are in hopeless conflict. This confusion constitutes in itself a grave social problem.

We have already recorded the simple solution of this problem

reached in England: [1] in labor disputes workmen or employers may lawfully do in combination whatever any employee or employer may lawfully do alone. In this country several state legislatures and Congress (so far as federal law is concerned) have attempted to enact the same general principles into law; but the Massachusetts law on this subject has been declared unconstitutional by the Supreme Court of that state, and in the opinion of many authorities the federal law is likely to meet a similar fate. The Massachusetts decision rests on the general argument that the right to work is property, that state and federal constitutions prevent any person from being deprived of property without compensation or due process of law, that combinations of workmen are frequently used to prevent persons from obtaining work, and that no such combination can be legitimatized by mere statute law. Whether the federal law on the subject — which is contained in the Clayton Anti-trust Act — will be similarly emasculated, it is impossible to say; but as this law is regarded by many labor leaders as the Magna Charta of the American labor movement, and as its provisions relating to the injunction, at least, are likely to be sanctioned by the courts, so much of the act as relates to labor combinations and injunctions has been briefly summarized below. Each provision of the law, it may be noted, records a legislative verdict upon some hotly contested point; and interpreted in this light the Clayton Act becomes a valuable historical summary as well as a statement of the present federal law.

"The labor of a human being is not a commodity or article of commerce." Labor organizations shall not be construed to be illegal combinations or conspiracies in restraint of trade under federal anti-trust laws.

"No preliminary injunction shall be issued without notice to the opposite party." No temporary restraining order shall be granted similar notice, unless it shall specifically show that immediate and irreparable injury will result before notice can be served and a hearing had thereon: and every temporary restraining order granted shall define the injury, state why it is irreparable and why the order was granted without notice, shall expire in not more than ten days unless extended for good cause, and shall provide for a hearing (on whether a preliminary injunction shall issue) which shall take

[1] P. 58.

precedence of all matters before the court except older matters of the same character. Proper bonds shall be executed to compensate for damages resulting from an injunction improvidently granted; every injunction or restraining order shall describe specifically and in reasonable detail the act sought to be restrained; and shall be binding only upon the parties to the suit, their officers, agents, servants, employees, and attorneys, or those participating with them, and who shall have received actual notice of the same. In contempt proceedings for violating any injunction or order forbidding an act which is also a criminal offense, the accused may demand trial by jury, and penalties are limited, in the case of natural persons. Judgments of conviction may be reviewed upon writ of error as in criminal cases; but these provisions do not relate to contempts committed in the presence of the court, nor to contempts committed in disobedience of any lawful order entered in any suit prosecuted on behalf of the United States.

"And no such restraining order or injunction (*i.e.* in labor disputes) shall prohibit any person or persons, whether singly or in concert, from terminating any relation of employment, or from ceasing to perform any work or labor, or from recommending, advising, or persuading others by peaceful means so to do; or from attending at any place where any such person or persons may lawfully be, for the purpose of peacefully obtaining or communicating information, or from peacefully persuading any person to work or to abstain from working; or from ceasing to patronize or to employ any party to such dispute, or from recommending, advising, or persuading others by peaceful and lawful means so to do; or from paying or giving to, or withholding from, any person engaged in such dispute, any strike benefits or other moneys or things of value; or from peaceably assembling in a lawful manner, and for lawful purposes; *or from doing any act or thing which might lawfully be done in the absence of such dispute by any party thereto; nor shall any of the acts specified in this paragraph be considered or held to be violations of any law of the United States.*"

The most important provisions of the Clayton Act are those which we have italicized and which apparently provide that a combination of workmen may lawfully do in a labor dispute anything that any party thereto might lawfully do in the absence of the dispute. Whether this is wise or not time alone can tell. On the surface everything seems to support the conclusion that men in concert should be permitted to do what they may do singly. If the right to work is property, so also is the right to quit work, and both are equally guaranteed by the federal constitution. An individual not under contract may quit working for an employer or dealing with a merchant

for any reason or no reason. Why, it is confidently asked, may groups of men not do the same? As a railroad engineer may quit work practically when he likes, why should not the Brotherhood of Locomotive Engineers quit work as a body when it pleases the organization, and thus tie up the entire railroad traffic of the country, for the purpose, say, of assisting the railroad conductors of one district in refusing traffic from another district in which a strike has been declared?

These questions carry in part their own answer. Many acts which are either harmless or trivial when performed by an individual become exceedingly injurious when swollen by concert and combination. A general strike or boycott for trivial or malicious ends cannot by logic-chopping be made anything else than impolitic and wrong. All this appears plain when we reverse the case and pass judgment upon what are practically the same acts when performed by employers. A sympathetic lockout, ordered against one innocent union, say of freight handlers, in order to prevent them from voting funds to assist the strike of a union of railroad telegraphers, for instance, would bring general criticism against the employers who ordered it; but it is essentially the same in principle as the sympathetic strike. The black-list — which has almost no avowed friends — is in essence similar to the indirect boycott or strike to secure the discharge of a non-union man. The simple truth is that many things are dangerous when participated in by great numbers, which are not so when performed by individuals.

The Clayton Act does not remove all the safeguards against harmful combination. Most of the states still have anti-trust acts and laws against unlawful combination. Moreover, if we have not had general strikes and nation-wide boycotts in the past, it is not because the laws or the court decisions have prevented them. The inherent difficulties in the way of their successful consummation, and the sense of social responsibility among trade unionists and the working classes generally, furnish the real protection. The real danger is that the new legislation will be interpreted as creating sound moral sanctions for

things which may be inherently unfair or immoral. If trade unionists and employers do not permit this legislation to blind their moral judgments, and remember that the removal of a legal ban from an action does not necessarily make that action under all circumstances either expedient or justifiable, then it is probable on the whole that the new legislation will result in more good than harm.

The new law has the virtue of equalizing things. The sympathetic lockout and the black-list cannot in practice be denied to the employers. They can use them because they can use them secretly; because the president of a great corporation or a small board of directors may maintain a black-list or order a sympathetic lockout so quietly that it would be impossible to prove their nature or for exactly what purposes they were declared. The trade union, on the other hand, must act in open concert, after legislative action, the nature and purpose of which can with difficulty be concealed. Many of the proceedings must be formally recorded. The new federal law puts the employer and the union on a more equal footing; although it ignores the vast interests of the public and removes legal penalties from actions which are often morally wrong and socially dangerous. In the end it will probably lead to the full exercise by the state of the right to suppress any black-list, lockout, strike, or boycott which becomes so extensive or offensive as to shock the public sense of fair play or seriously menace public welfare.

Child Labor Laws. — The class of laws which we have been considering has been designed to relieve the laborer from ancient disabilities, so that he may be enabled in combination with his fellows to help himself. Most modern labor laws, however, are of a different type. They assume that the welfare of labor is of peculiar importance to society and that the state is therefore warranted in protecting the wage-earning classes, openly and frankly. Perhaps the earliest and most typical legislation enacted in this spirit is the child labor law.

The problem of child labor is frequently misconstrued. The principal reason why children work is not found in the needy

widow, the abandoned wife, or the stony-hearted employer. The principal causes of child labor are the restlessness of the child; the failure of ordinary school training to hold his attention and arouse his ambition; and the ignorance or selfishness of parents. And the evil consists, principally, in the fact that the child who goes to work early usually gets into a "blind alley" occupation, and is thus prevented from developing his full potential earning power. His ability to serve both himself and society is curtailed by his excessively early start. "The better occupation either will not receive the young child at all, or wants him with more schooling, or offers such a low initial wage that both child and parent turn to the mill, with its greater present wage opportunities."[1] The wage in the low-grade occupation is at first relatively high, but in three or four years the boy has reached his maximum earning capacity and early marriage fastens him to the job. The boy who begins at sixteen years or later soon catches his less fortunate brother, and in a comparatively few years is earning a superior wage. As a foundation for real promotion and advancement the work which children between fourteen and sixteen years of age do has usually little value.

It is thus plain that the problem of child labor is positive and constructive, not merely negative. It avails little to prohibit children from working at this or that; agencies must be provided helpfully to guide their activities. Already the most advanced states have incorporated in their laws a provision requiring employers of child labor to give the children a specified amount of vocational training, or time to secure such training, in institutions provided by the state. More important still, agencies are being established to determine by physical and psychological tests whether children who have completed the required schooling are really fitted to enter industry, and what kinds of work they are best fitted to undertake.[2]

[1] Susan M. Kingsbury, "The Relation of Children to the Industries," in *Report of Massachusetts Commission on Industrial and Technical Education*, p. 44.

[1] See *Mental and Physical Measurements of Working Children*, by Helen Thompson Wooley and Charlotte Rust Fischer.

The beginnings are tentative and the work difficult. But the period draws to an end in which ignorant children drift or are pushed by ignorant parents into the work which lies nearest at hand; and the time approaches when the most careful thought will be given to the selection of one's life work and the training for it.

Child labor laws differ greatly in the different states, and the resulting inequality of burden upon competing employers so complicates the problem that, in 1916, Congress enacted a law debarring from interstate commerce goods produced by very young children — leaving each state to legislate as it sees fit about products confined to intrastate trade. This, in our opinion, should be productive of far more good than evil. But the constitutionality of this new federal legislation is involved in grave doubt, and the new statute is in some respects unfortunately worded, so that its exact scope is not yet clear.

A good state child labor law, it is now generally conceded, should prohibit the employment of all children under fourteen, and of all children under a higher age limit who are undersized, weakly, or illiterate. "Young persons" who are deficient in the fundamental requirements of an English education should be compelled, where possible, to attend a continuation school. Work in "immoral" or dangerous occupations, at night, or in excess of eight hours per day should be forbidden for all children under the higher age limit.

The successful enforcement of such laws has been found difficult. Birth or baptismal certificates, or other similar evidences of age, have to be procured from parents; certificates of attendance and proficiency from school authorities; examinations of health and educational requirements must be made; and employers required to demand, file, and return employment certificates. The community must maintain and properly support factory inspectors and health and school attendance officers in adequate numbers, with power to prosecute violations of the law and with secure tenure of office. The community should further provide for dependent families which

need the earnings of their children, keep birth records, and maintain schools fitted to hold the attention of the child and properly train him for his life work. "The best child labor law is a compulsory school law covering forty weeks in the year and requiring the attendance of all children under fourteen years of age." [1]

The Labor of Women. — The labor of women is not in itself a problem which calls for legislation. The evil consists in working under conditions which undermine health and morals, or for inadequate wages. It is impossible to describe here in detail the various laws which have been passed relating to the employment of women. Women are subject to the "factory acts" relating to sanitation, safety, and occupational diseases, and to general statutes regulating production in tenement houses and the time, frequency, and character of wage payments. In the more advanced states also, the labor of women in manufacturing, mechanical, and mercantile establishments is likely to be safeguarded by laws limiting the hours of labor, prohibiting night work and continuous employment for more than six hours, for example, without an interval for meals; providing and permitting the use of suitable seats; requiring separate and sanitary toilet facilities; prohibiting the employment (knowingly) of women within two weeks before or four weeks after childbirth; and — in Massachusetts for example — directing local authorities to furnish responsible mothers having dependent children sufficient aid "to enable the mothers to bring up their children properly in their own homes."

Until very recent years, regulations similar to the above represented the extreme limit to which any American state had gone in the protection of women. And even the constitutionality of such regulation was in grave doubt, for an important statute limiting the hours of labor had been declared unconstitutional by the highest court in Illinois, and in New York a statute prohibiting night work had been similarly annulled, on the general grounds that they infringed the free-

[1] *Cf.* Florence Kelly, *Some Ethical Gains Through Labor Legislation*, pp. 98, 99, and *passim*.

dom of contract and were "unduly discriminatory between citizens," the court remarking (in the New York decision) "that woman is no more the ward of the state than is man." But under the more liberal leadership of the Supreme Court of the United States, both of the state courts in question have recently reversed these decisions and have sanctioned similar laws as reasonable health regulations, looking not only to the protection of the individual woman but to the "welfare of the race."[1]

Minimum Wage Laws for Women. — In about a fourth of the states minimum wage laws have been passed, with the general object of requiring that wages paid in certain occupations shall be sufficient to provide for a woman's normal needs "regarded as a human being living in a civilized community." Whether these statutes will be effective time alone can tell, but their passage marks a revolution in the social and legislative philosophy of this country.

Minimum wage laws were first adopted by the Australian state of Victoria in 1896 to regulate wages and other conditions of labor in the "sweated trades." Trades or industries in which wages are particularly low are usually singled out by legislation, though in Victoria the government may apply the system to additional trades by administrative order. These wage boards, as we have seen in the preceding chapter, are designed to induce compulsory collective bargaining, in which the state participates by compelling employers and employees to fix standard conditions of employment. In England and this country the legislation is as yet much more tentative and restricted. "The outstanding characteristics of the American minimum wage legislation compared with that of England, Australia, and New Zealand are these: The first is its omission of men; the second is its reference to the welfare of the people as a whole; the third, which is responsible for both the others, is its subordination to the courts on the grounds of constitutionality, entailing the practice of placing upon American states the burden of proof that they

[1] L. D. Clark, *The Law of the Employment of Labor*, p. 103.

are acting within their police powers when they create such wage commissions and wage boards or conferences." [1] Some of the American laws, it may be added, make no provisions for joint wage boards of the Australasian type, but provide that the minimum wage shall be fixed directly by a state labor or industrial commission.

The general principles of minimum wage legislation are simple. In many trades the majority of the workers do not receive enough wages to maintain their physical efficiency. Of these sub-standard wage workers a large number are partially supported by other members of the family, a considerable number are assisted by charity, a few eke out their living by intermittent or regular prostitution, and some "actually die of under-nutrition and worry." [2] The work as a rule is simple and the supply of labor excessive. Usually there is no labor organization. The workers are weak and the wage is fixed by individual bargaining in which the predominant force is sometimes the rapacity of the employer. The tendency towards a uniform or standard wage in many of these trades seems to have been checked by the absence of labor organization, and competing establishments in the same industry are found again and again paying strikingly different wages for the same grade of labor.

It is held, in short, that trades which pay less than a living wage are parasitic; that they constitute a positive drain upon society at large, and that any measures necessary to place these trades on a self-supporting basis are both justifiable and economically helpful. The establishment of a minimum wage is expected to force a certain number of slow and incompetent workers out of employment, although provision is usually made to permit them to work under special permits. But that society should be forced openly and frankly to deal with and take care of its incompetent workers is regarded as an advantage. It is expected that such legislation in some instances

[1] Florence Kelley, in *The Survey*, vol. xxxiii, p. 487.

[2] H. R. Seager, "The Theory of the Minimum Wage," *American Labor Legislation Review*, vol. iii, No. 1, p. 84.

will result in increased prices. But the consumer is expected to bear his fair share in supporting those who supply his needs, and both *a priori* analysis and experience in Australia and England make it probable that the rise of wages would not be accompanied by a corresponding rise in prices.[1] Finally it is expected that the increase in wages will compel reorganization of the parasitical trades so that in the end the cost of production will be decreased rather than increased. Incidentally the operation of the wage boards is expected to stimulate organization among the wage workers concerned and to react favorably upon immigration. Immigrants are less likely to come, many believe, if they know in advance that they must be able to earn the minimum wage or else leave the country. Price cutting in the labor market will be checked; and the increase in wages will focus competition upon the quality and efficiency of the laborer. Most important of all, perhaps, the system is expected to compel a wider and more effective use of labor-saving machinery.

Minimum wage legislation slowly introduced and carefully administered meets the test both of economic theory and actual experience. In Victoria the legislation which was at first doubtfully applied to six trades has now been made applicable to 141; and 150,000 workers in a population numbering less than one and one half million "have the minimum wages in their trades prescribed by law." Vigorously opposed by the employers on its introduction, it seems from reports of disinterested investigators to have established itself on a firm foundation. There is yet some opposition to details of the law and vigorous criticism of the way in which it is administered; but from all that can be learned those who desire to do away with this system of regulation constitute a very small minority. In England the results seem equally favorable. Nothing revolutionary has been accomplished, but the system has demonstrated that it is practicable, even in highly complicated trades; that it can be trusted to raise wages without seriously disturbing prices; that it mildly stimulates organization among work-

[1] *Cf.* N. I. Stone, in *The Survey*, vol. xxxiii, p. 514.

ers who need organized effort to better themselves; that it compels serious study and public investigation of trades which need both; and that it is not productive of serious evils. The minimum wage has not become the maximum nor has the operation of the act resulted "in wholesale dismissals of old and slow workers. The predominant method of payment in the scheduled trades is by piece, and where this is the case the employer who has fixed piece rates yielding the equivalent of the time rate to the 'ordinary worker' runs no risk of penalty if his sub-ordinary worker fails to reach that amount by reason of incapacity or advanced age."[1]

So far as economic theory is concerned, there is no reason to believe the minimum wage proposition unsound. The establishment of minimum standards of sanitation and safety in Germany does not seem to have hurt industry there, and there is no reason to believe that the establishment of minimum wage standards would do so. Without regulation much of the competitive fight centers about the mere money wage. A poor workman may be more profitable to the employer than a skilled workman provided the poor workman can be secured for a small enough fraction of the wage it would be necessary to pay to the skilled workman. Establish a dead line — or better, a health line — and the emphasis will be placed upon efficiency instead of cheapness. Wage earners will have to meet higher and better standards. The competitive struggle will thus operate to evoke efficient rather than low-paid workmen. And the higher cost of labor will help to force the introduction of better machinery and better methods of organization.

Obviously, not all the claims made for this system will bear scientific scrutiny. There is, for instance, probably more error than truth in the contention that every industry which pays its minor workers less than a living wage is a detriment rather than a help, an industrial parasite sopping the economic strength of a community. Until a far better distribution of the labor force has been secured, there will continue to be in

[1] Constance Smith, "Working of the Trade Boards Act," *Journal of Political Economy*, vol. xxii, p. 625.

all probability a surplus of workers who cannot earn a living wage and yet had better earn a supplementary wage than be idle. There were in 1910, for instance, in this country 1,847,600 females between the ages of 16 and 20, inclusive, engaged in gainful occupations. Young women might possibly better spend these years in training for their life-work, including housekeeping and the difficult vocation of marriage. But until adequate provision for such training is made, young women of this age had better be employed at wages which will tend to make the family income more adequate than not to be employed at all. After all, however, these are minor modifications of the theory upon which the minimum wage program rests. That standards should be adopted, including a wage standard, which both employers and employees must meet, is on the whole consistent with the best economic and social theory.

Some trade unionists oppose minimum wage laws on the grounds that the minima will become maxima and that wages should not be regulated by law. But the first charge has been disproved by experience, and the minimum wage at its best is a program for compulsory collective bargaining, not for the regulation of wages by statute. It aims to introduce into unskilled vocations what are essentially trade-union methods of standardization, and the criticisms which are directed against it apply equally well to trade-union procedure.

Factory Acts. — Constitutional guarantees, particularly that of free contract, prevent in this country the general regulation of the labor of adult men, but under the police power the states have the right, indeed in the language of the Supreme Court, "it is among their plain duties," to regulate the physical conditions of employment so that accidents and occupational diseases may be minimized. These regulations, frequently referred to as factory acts, are typified by the familiar laws requiring proper fire escapes, the removal of dust or noxious vapors by fans, the placing of guards about dangerous machinery, the installation of mechanical belt shifters, and connection by bells or tubes between rooms in which machinery is used and the engine room. Such laws have now been adopted in most of the states, but

their enforcement in many states has been very ineffective. In 1913 there were fifteen states with nearly a million wage earners in manufacturing and mechanical industries which had practically no provision for factory inspectors. And even where factory inspection is provided, it has too frequently been half-hearted, inexpert, and emasculated by political interference. In one state, " where the chief factory inspector divides his time between conducting a livery stable he owns and the business of caring for some 30,000 factory wage earners, I found him contributing a remarkably concise annual report of exactly fourteen words. It reads, under date of July 1, as follows: 'I have visited the same factories as last year and find conditions the same.' " [1]

While politics and administrative ineptitude have seriously crippled factory regulation in this country, the truth is that the problem was a new and difficult one and that there were procurable few or no real experts until very recent years. Very recently, however, great improvement has been made both in the laws and their administration. Wisconsin, Massachusetts, New York, and other states have gone far towards solving the administrative problem by placing appointments on the civil service basis and consolidating powers previously lodged with police, factory inspectors, and health commissioners into one industrial or labor commission, with general power to enforce the rules necessary to provide reasonable sanitation and safety. In this way the necessary elasticity of rule and standard has been secured; and in adopting rules or standards the coöperation of employers and labor organizations has been secured, thus insuring more practical rules and the good will of those to whom these rules apply. Regulation by the state can never become effective until responsibility and power are centralized and the responsible administrative head given sufficient discretion nicely to adapt regulations to the subtle complexities of modern industry. With employers, employees, and factory inspectors working together under practicable regulations in

[1] E. F. Brown, "The Efficiency of Present Factory Inspection Machinery in the United States," *American Labor Legislation Review*, vol. iii, No. i, pp. 27–28.

whose formulation all three have coöperated, rapid progress has recently been made in the prevention of accidents and equally gratifying improvement has been made in the methods of compensating for accidents.

Employers' Liability. — Under the common law of employers' liability, the employer is under obligation to provide his workmen with a reasonably safe place in which to work, with reasonably safe machinery, and with reasonably prudent and competent fellow workmen; and the employer is liable in damages for any accident to his workmen resulting from failure to display this ordinary prudence and care, as well as from the similar failure or negligence of any superintendent, overseer, or vice-principal authorized to issue orders in his name. When the employer has observed the ordinary precautions of a reasonably prudent man, however, the employee assumes all the hazards incident to the employment or arising from the negligence of fellow servants; and even though the employer is negligent, the employee cannot recover damages for an accident, if the employee was aware of the employer's negligence and voluntarily accepted the risk, or if the employee has been guilty of additional or contributory negligence.

This, in bare outline, is the common-law foundation of the doctrine of employers' liability. It has been modified incessantly by statute law and by changing interpretation of the courts; it is vague, uncertain, and legalistic in the worst sense. Under it not more than ten per cent of the victims of industrial accidents received any compensation, and of the damages paid by employers the victims received on the average probably less than 50 per cent. The rest went for court costs and lawyers' fees. A class of professional accident attorneys, "ambulance chasers," who exploited industrial accidents for their own rather than the victims' benefit, appeared in most industrial centers; ignorant juries decided on the difficult facts in the most capricious ways, now refusing relief in deserving cases, again voting excessive damages for trivial or perhaps simulated injuries; the cases filled the courts; decisions turned upon hair-splitting distinctions and metaphysical niceties; the humane employer,

the conscientious lawyer, the far-sighted judge, workingmen, and the general public became, it is hardly too much to say, disgusted with the inapplicability and bungling unsuitability of the doctrine of employers' liability properly to deal with the grave social problem arising from industrial accidents.

Attempts to solve this problem, as stated above, first took the form of incessant amendment of the old law. The fellow-servant doctrine (that the employer was not responsible for accidents arising from the negligence of co-employees as distinguished from vice-principals) was curtailed in some states by confining " fellow servants " to those employed in coördinate occupations immediately associated with the victim, and the employer's defenses of " assumption of risk " and " contributory negligence " were limited and in some jurisdictions almost abolished. But the truth is that the whole social philosophy underlying the law of employers' liability was mistaken, " not so much unjust as wholly inapplicable." It misconceived the nature of the social problem involved and offered remedies that were wholly ineffectual. It attempted — so far as one can discover behind it any real rational philosophy — to single out those accidents for which the employer was to blame and to compensate workmen in accordance with the damage resulting from the employer's negligence. Investigation shows, however, that the employer is responsible for only a minority of the accidents which occur. The victim himself, his fellow workers, and, most important of all, the occupational risk itself are responsible for the great majority of accidents. But the victim's need and that of his family are just as great when the accident results from the victim's negligence as when it results from the employer's negligence. It is not a question of individual fault and punishment for that fault; it is a question of industrial or social loss and insurance against that loss. The government should of course compel both employers and employees to take every reasonable precaution against accident, by unequivocal law or administrative order; and every infraction of the law should lead to criminal indictment, not civil action. But even if this were accomplished, there would still remain a large

number of industrial accidents which if not compensated for would lead to poverty, unemployment, and the suffering of innocent women and children.

That the burden of industrial accidents should be borne by the industry itself or the consumer and not by the laborer or his family is very generally recognized; and most foreign countries, together with the federal government and more than half of the states, have replaced or supplemented the old law of employers' liability with workmen's compensation acts. The laws are described and discussed in a later chapter, on Insurance. They have worked well: not perfectly, but with much more certainty and with far less cost than the old laws. Defects naturally exist in the new system which should be remedied in the future. The usual compensation is too low to indemnify the victim and his family adequately for the loss resulting from the accident, and the limitation of payments for permanent disability to four or six years or less is illogical and will cause hardship. But the new system is so much superior to the old that, despite these defects, its adoption must be regarded as a noteworthy step in social progress achieved through legislation. As a concrete contrast with the awkward, expensive, capricious working of the old liability law, the results of the operation of the Wisconsin compensation act during the year ended June 30, 1915, are suggestive of the improvement effected by the change. Of all the industrial accidents occurring that year, 93 per cent were settled between the employers and workmen with no outside interference beyond a simple "approval" by the state Industrial Commission; 3 per cent of the cases were carried to the industrial commission for adjustment; and only one fifth of 1 per cent was carried to the courts. The injured workmen received for indemnity and medical expense $1,350,000, while the administrative cost to the state was only $13,771.

Philosophy of Labor Legislation. — In the preceding sketch it has been possible only in the most superficial way to call attention to a few of the more important modern labor laws. It is equally impossible to discuss adequately the general aspects

of the labor movement as it expresses itself in legislative action. In conclusion, however, it may be suggestive in a rather dogmatic way to pass in review some of the broader aspects of this movement:

Mercantilism and its alleged failure, or the breakdown of old labor legislation in the seventeenth and eighteenth centuries, furnish no adequate reason for concluding that the new legislation will fail. The old laws were enacted by a ruling minority in behalf of that minority. They had to contend with the persistent and growing opposition of a large majority of the people. They lay athwart the path of democracy. The new laws have a much greater chance of success because they cannot be passed until they have the support of a majority, and we may now reasonably look for an administration thoroughly in sympathy with their purposes.

Administratively, an improved mechanism has been developed in the industrial, labor, or welfare commission. From the standpoint of labor legislation the tripartite division of American government has been deeply unfortunate. Legislatures have enacted laws, courts have passed upon them, and executives have administered them who did not understand the conditions and technical facts with which they dealt. More legislative power and more judicial power must be lodged in labor commissions, manned by real experts (whom we are just beginning to train) and empowered to deal with complex labor problems by administrative orders or, more properly perhaps, legislative and executive orders. The original formulation of general social policy must be left to the legislature; ultimate constitutional and judicial questions must remain with the courts; but all special questions, legislative, judicial, and administrative, should be left as fully as possible to a body supplied with means and time to learn the technical facts and to enlist both employers and employees in formulating and then observing the details of the law.

So far as constitutional questions are concerned, the main battle in the courts has, we believe, been won. Individualism and freedom of contract have constituted in the past a chronic

American disease; but an adequate antitoxin has been developed in the *police power*. The doctrine of the police power raises essentially a question of fact: does the condition in question genuinely menace the health or morals or safety of the community? Because this is primarily a question of fact, it is vitally important that we should have commissions or officials empowered to get the facts in an impartial and authoritative way. When we have the facts we shall recognize fully that "liberty" is a composite and mutually contradictory term; that there are liberties rather than one single liberty; that to preserve a deeper and more genuine liberty we must frequently sacrifice liberties of a smaller and more superficial character, and to preserve the liberty of the many it is sometimes necessary to restrain the liberty of the few. If there is an inalienable right of free contract, may an individual in the exercise of that right bind himself to slavery for life?

Finally it is being found that this protective legislation — protective against poverty and exploitation either by persons or circumstances (the last is far the more important) — does not pauperize or weaken human fiber, or check the competitive struggle for existence upon which so much is believed to depend. Underfeeding, undereducation, underthinking, all the hand-to-mouth vicissitudes that accompany abject poverty, undermine human fiber and pauperize far more effectually than state regulation or assistance can ever do. Moreover, the modern labor law is the antithesis of paternalism. It is the collective way by which the wage-earning masses help themselves; and it is political because the evil which it seeks to remedy is political as well as individual. "Of all national resources labor is by far the most important. So important is it that one may almost say that all else depends upon it. Not until a nation has secured a body of sturdy, skillful and contented workers can it be said to have met the first requisite to national efficiency. . . . As in the past the nation that would succeed had to apply itself to the training of its soldiers, so now it must apply itself to the training of its industrial workers. We are appalled at the suffering, loss of life, and destruction of wealth entailed

by war and preparation for war. They are as nothing compared with the misery, sickness, and death now due to the failure of society properly to control the conditions under which industrial work shall be performed. No one can calculate the loss daily taking place as the result of the use of feeble, untrained, discontented workers."[1] Labor legislation represents above all else an organized effort to achieve national and social efficiency.

QUESTIONS

1. Under what circumstances is the labor law used to determine conditions of employment? What are its characteristics in this connection? What differences are found in the determination of conditions of employment by law and by a strong trade union?

2. What is the difference between a primary and an indirect or compound boycott? Is the latter lawful in the jurisdiction in which you live? Is a strike to prevent the employment of non-union men lawful?

3. Does the anti-trust act of your state apply to labor organizations? What is a conspiracy? and what are the peculiar characteristics of the law of conspiracy?

4. Against what aspects or characteristics of the injunction do trade unionists protest?

5. Summarize the child labor laws of your state and those relating to industrial education, continuation schools, and mothers' pensions. What arguments have been advanced against mothers' pensions?

6. Do minimum wage laws operate to reduce all wages to the legal minimum? Summarize evidence on this point from the Frankfurter-Goldmark brief and other sources.

7. What bearing has the minimum wage on the immigration problem? Is it socially expedient that minors living in families with adequate incomes should be prohibited from working for less than the living wage?

8. Does compulsory insurance against sickness and old age tend to undermine or strengthen individual thrift? Give reasons.

9. Briefly summarize the law on employers' liability in your state; or if it has a workmen's compensation act, summarize the results of that law as given in the latest published statistics.

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CHAPTER XXIV

INTEREST

INTEREST is the price paid for the services of capital. It appears in two forms: *loan interest*, the amount paid by one man to another for the use of money or goods owned by the latter, and *imputed interest*, that portion of the value of the products of industry which is attributed or imputed to the services of capital, as distinct from the services of land and labor. Interest is usually measured as a percentage of the money value of capital, and this, coupled with the fact that capital is often lent in the form of money, has led to the prevalence of the idea that interest is a payment for the use of money. This is only a partial description of interest, however, for it does not include imputed interest nor the loan interest paid in the form of rentals for the use of many forms of capital — buildings, for example.

Objections to Interest Taking. — It is only in modern times that interest has been generally considered a legitimate and necessary form of income. The strong denunciations of usury contained in both the Old and New Testaments are denunciations of interest taking, for the word "usury" formerly meant any kind of interest, and not merely excessive interest, as at present. The opinion of many classical writers is illustrated by Aristotle's dictum that "money was intended to be used in exchange, but not to increase at interest." During the greater part of the middle ages the authority and teaching of the church was set definitely against the taking of interest in any form. In the middle of the fourteenth century the prohibition of usury was incorporated in the civil law. These objections, however, had reference chiefly to loan interest, and interest on money lent for personal use at that; for capital was not thought of as one of the factors in production until comparatively modern times. In fact, by the fifteenth century, when opportunities for the profitable use of money had appeared in such forms as the purchase of rights to receive land rents, or partnership ventures in trade (where interest was held to be justified by the risk incurred), the canonists (the writers on church law) admitted the legitimacy not only of such gainful employments of money,

but also, in many cases, of interest on loans. The justification of loan interest took on at first many curious forms. It was regarded in some cases as a fine for delay in the repayment of the loan, so that lenders often resorted to the subterfuge of lending money gratuitously for a nominal period, the real agreement being that they were to get back their money principal, with a fine for the delay added, at a later date. In other cases loan interest was justified as a payment for the loss of the possible gains which the lender might have got by using his money himself. Usury, which at first meant any kind of loan interest, came to mean interest on money loans to relieve personal needs, rather than for gainful employment, then interest on loans in which the element of risk was lacking, and finally, excessively high interest.

Today the use of capital is so prominent a feature of our productive methods that the legitimacy of interest is not generally questioned. Socialistic writers, however, insist that interest is only a result of the system of the private ownership of capital, and that with the abolition of private property in production goods what is now counted as interest would become part of the wages of labor. It is accordingly important that we should understand clearly *why* interest has to be paid, as well as that we should study the factors determining the *rate* of interest. We shall find, however, that the explanation of the necessity of interest is really a part of the explanation of the rate of interest.

Inadequate Explanations of Interest. — An idea that naturally suggests itself is that interest has to be paid for the use of money because " money can be profitably employed in business." But this is only an attempt to explain loan interest by assuming the existence of imputed interest. What we want to know is why " money can be profitably employed in business."

A similar, but somewhat more definite, attempt at an explanation is contained in the statement that interest is paid because capital is productive. It is pointed out that by the use of capital goods the product of industry is greatly increased over what could be produced by labor and land alone. This is, of course, true, but taken alone it does not explain interest. The problem of interest relates to the *value* of the product, not to the *amount* of the product. There is nothing in the mere quantity of the product, taken by itself, that gives value to it. Farmers have found more than once that a large wheat crop has sold for less in the aggregate than a small one. The real problem of interest is this: How can an entrepreneur, by the use of capital, increase the selling value of his product enough to not only pay

for the capital actually used up in production, but also to pay in addition a surplus in the form of interest upon the capital employed? Nor can we say that "capital produces interest." It cannot be too strongly emphasized that neither land, nor labor, nor capital produces value. They are simply the instruments used in the production of things that command a price in the market because they satisfy human wants and will not be furnished except at a price. Part of the value of the product is *imputed* or attributed to capital in the form of interest, and it is because of its capacity to earn interest that capital is valued. To say that capital produces value is to reverse the true process. Capital goods produce (or aid in the production of) other goods, and the selling value of these produced goods is the cause of capital value.

Why Interest can be Paid. — We shall find the analysis of our problem somewhat simpler if we divide it into two parts: first, why interest is *possible;* and second, why interest *must* be paid. In discussing why interest *can* be paid, we shall assume that interest must be paid if capital is to be used in production, reserving the discussion of the legitimacy of this assumption for the following section.

It is the physical productivity of capital — the fact that capital can be used in coöperation with land and labor in the production of goods — that makes it possible for the entrepreneur to look upon part of his total money income as interest on his investment of capital. Now, as we have seen, the mere fact that capital is productive in the physical sense does not explain interest, but the fact that capital is used *under the guidance of entrepreneurs* in the production of goods does explain the *possibility* of interest. The mere physical productivity of land does not explain rent — land will grow weeds as well as wheat; nor does the mere physical productivity of labor explain wages — some men have put years into the construction of perpetual-motion machines that are absolutely worthless. But it is the business of the entrepreneur to see that land and labor are used wisely; and from his point of view they are used wisely if they are used in the production of things that consumers want, and

want intensely enough to pay such prices as will enable the entrepreneur to pay the rent of the land and the wages of the labor employed. Similarly, an entrepreneur will not employ capital in any kind of production unless the prices he expects to get for his products are such as to cover the expenses incurred in the use of capital. Nor will he knowingly use so much capital that his product will sell for less than a smaller product would have sold for, any more than he will knowingly produce an unprofitably large quantity of goods by the use of too much labor or too much land.

On the one hand, the entrepreneur has to estimate the prices he will get for his products; on the other hand, he has to estimate the productivity and the expense of land, labor, and capital. The expense of capital includes, first, the cost of the capital actually used up in production; and second, interest on all of the capital used, whether " used up " or not (assuming, as previously explained, the necessity of interest). The principles that will guide the entrepreneur as to the relative proportions of labor, land, and capital he will use have already been discussed in connection with the general subject of diminishing productivity. We may, however, emphasize again the fact that productivity must be attributed, not to " capital in general," but to specific units of specific kinds of capital, used in connection with definite amounts of land and labor; the productivity imputed to any particular unit of capital being the precise amount of product actually dependent upon the use of that particular unit — the amount by which the total product would be decreased if the unit in question were not used. An entrepreneur will increase his use of capital rather than of labor or land, when a given expense for any kind of capital will add more to his product than would a similar expense for labor or land.

The Necessity of Interest. — Free goods, such as air or the force of gravitation, are productive in the physical sense, in that they are absolutely necessary to most forms of production. The surface of Lake Michigan is used in producing the service of transportation in essentially the same way as is capital in the form of a railway roadbed and track. But we cannot impute

productivity to specific units of free goods, for the simple reason that the amount of the product is not dependent on the utilization of any one unit of them. Any one cubic foot of air could be dispensed with; we cannot even conceive of the force of gravitation as limited in quantity; the Great Lakes furnish pathways that are more than sufficient for all the vessels that traverse them. We do impute productivity to the better *lands* that are used in production, because any one acre of them could not be withdrawn from use without a diminution in the product. The controlling reason for this difference is that the spontaneous supply of free goods is in excess of the use that is made of them; while the supply of the better lands is limited as compared with the demand for them. This suggests at once why productivity has to be imputed to specific units of capital, and that is, that the supply of capital is limited.

Why is the supply of capital limited? This question leads us to examine the nature of the supply of capital. Imagine a society without capital carrying on its productive processes by the use of labor and land only. So long as the members of this community produce only what they consume directly, or (if, despite the absence of capital, money economy and a system of exchange may be imagined to prevail) so long as they spend all their money incomes for things used up immediately in the satisfaction of their wants, there will be no accumulation of capital. In order that capital shall be furnished, it is necessary that some members of the community turn aside from the production of things that are used in the immediate satisfaction of their wants and devote their time to the production of goods that will be used in further production. Whether they do this on their own account, or whether they are paid for their work while they are doing it by others, some postponement of the satisfaction of wants is necessary. In the one case those who produce the capital goods give up temporarily the satisfactions which they would have derived from the consumption goods they might have produced. In the other case, those who are devoting part of their money incomes to the payment of those who are producing capital goods are giving up the immediate satisfactions

which they might have secured with the money. In either case the production of capital involves the sacrifice of *waiting* on the part of some members of the community.

But why should waiting be called a sacrifice? Do not those who give up present satisfactions in order that capital goods may be produced get a full repayment if they get back in the form of the products of their capital goods as much as they, for the time being, give up? In other words, why should capital not be furnished for productive purposes if those who furnish the capital get back an exact equivalent (in price) for the amount of capital they have supplied? Why should an extra payment, in the form of interest, be necessary to induce saving?

The answer to these questions is found in the difference between our present appraisals of things to be had *now* and things to be had in the future. We visualize the present more vividly than we do the future; we yield sometimes to the temptation of satisfying the more trivial wants of the present, even when we know that we are thereby rendering uncertain the satisfaction of more important wants in the future; and when we take considerable periods of time into account, we may reasonably say that the uncertainty of life itself gives us some ground for preferring present to possible future satisfactions. Notwithstanding the vast difference between civilized men and savages in this respect — for many of the latter seem to have absolutely no regard for future needs — the fact still remains that waiting is a sacrifice, and in order to induce the saving that is a prerequisite to the use of capital in industry, a premium or reward for waiting has to be paid in the form of interest. This fact is the most fundamental thing in the explanation of interest.

It must not be inferred that, in the actual economic life of today, no capital would be supplied if interest were not paid. There are other motives that induce men to save parts of their incomes. The desire to provide for old age and for such contingencies as sickness and accident, or to make provision for one's family in case of death, would result in a considerable amount of saving. The mere pride of accumulation, and the fact that the satisfaction of many important wants, such as the

desire to own a house, or the desire for foreign travel, necessitate the gradual accumulation of what is to most persons a considerable sum of money, must also be given due weight. Moreover, none of these motives would in itself induce men to invest or lend their saved funds in productive undertakings if no interest at all were paid. In fact, this would be a matter of indifference, for savings might just as well be hoarded. But a very low interest premium would suffice to overcome this indifference and to bring about their investment in productive undertakings. Even this low interest rate, however, would be sufficient to balance, in some additional cases, the difference between the intensity of present wants and the intensity of future wants, so that in these cases, in turn, spending or saving would be a matter of indifference — an indifference that would in its turn be overcome by a slight increase in the interest rate. In a similar way every increase in the interest rate would induce more persons to save and would induce many of those who were already saving a part of their incomes to save a larger proportion of them.

At any given time, accordingly, the interest rate is considerably higher than is necessary to secure a large part of the waiting that devolves upon those who furnish capital funds for productive purposes. It is just high enough, however, to be a recompense for *marginal waiting*, which is the waiting that would not take place if the interest rate were any lower. If the interest rate is 5 per cent, a dollar today is worth a dollar and five cents a year from today, not to all savers, but to the marginal savers.

Investment. — We have seen that the supply of capital originates in the fact that some people save part of their money incomes, and that interest has to be paid in order to induce this saving. Such persons are said to get an "income from their capital." Strictly speaking, their savings are not productive capital at all, in the sense in which the word "productive" is used in this book. Productive capital consists of the concrete material instruments of production, such as factory buildings, machines, raw materials, merchants' stocks of finished products,

and the like. Savings are not productive capital in this sense, but the process by which they are transmuted into productive capital is a simple and familiar one. The simplest case is where the entrepreneur saves part of his own money income and uses his savings in the purchase of additional capital goods, the selling value of the products of which he estimates will be large enough to repay him for his waiting, as well as to replace his capital as it is used up, that is, to earn interest for him as well as repay the principal. Or, the entrepreneur may borrow money directly from others who have saved it, agreeing to pay annual interest, and in addition to repay the amount of the loan — the principal — at some specified time. In the complex economy of the present, however, it very often happens that the entrepreneur who can use money profitably and the man who has surplus funds to invest do not arrange the transaction directly. Savings are "placed at interest" in savings banks, insurance companies, or other financial institutions, and it is to such institutions that the entrepreneur who thinks that he can use more capital profitably applies for loans.

Very often the entrepreneur is a corporation rather than an individual, but the same three methods of obtaining capital are open to it. The corporation may choose to reinvest some of its net earnings in productive forms of capital rather than to pay them all out in dividends to its stockholders. When in need of money to meet a temporary emergency, the corporation may borrow from banks just as the individual entrepreneur does. When in need of money for more permanent investment in the durable forms of capital goods, the corporation usually issues its own interest-bearing obligations in the form of bonds, which it sells to banks, insurance companies, and other financial institutions, as well as to individuals. Bond issues are merely one way of borrowing money. But whether the money funds are furnished by the entrepreneur or by others, the formation of capital necessitates, first, the saving of parts of money incomes, and second, the use of the funds thus secured in the purchase of capital goods. The expression "investment of money" is used as a short way of describing this twofold process.

The Replacement of Capital. — It is clear, then, that saving which necessitates waiting, is a prerequisite to the formation of *new* capital, that is, to an increase of the supply of capital already in existence. But at any given time the capital already in existence forms a very large proportion of the total supply of capital, and it may be thought that the present interest rate does not affect this portion of the supply. We must, however, take into consideration the fact that almost all kinds of capital are being continually used up in production. This using up may be a matter of a single use, as in the case of fuel or raw materials, or it may be a gradual wearing out, as in the case of a machine, but such differences are differences in degree of durability rather than differences in kind.

As we have seen, the entrepreneur will normally not employ any given additional unit of capital unless he expects to get enough from the selling value of the added product to replace the capital actually used up in production as well as to pay interest. This means that if the entrepreneur's estimates prove correct, part of the money income he gets for his product may be regarded as a *replacement fund*, sufficient in amount to replace the capital used up in production.

We must not, however, make the error of thinking of the replacement fund as definite in quantity. Whether or not any unit of capital produces enough to furnish a replacement fund, depends on whether the entrepreneur's estimate is a correct one. There is no reason why unproductive forms of capital should be kept intact in amount. He would be a foolish business man, for instance, who would keep reinvesting a certain amount of money in raw materials in the face of a diminishing demand for the finished product. Even if enough income is earned to form a replacement fund, the capital used up need not be replaced unless the entrepreneur so chooses. A farmer may have saved for years in order to buy a reaper. The reaper will enable him to raise more wheat, or, possibly, to produce the same amount of wheat at less expense. In either case it will mean an increase in his net money income. He may, if he chooses, set aside enough of this added income so that, when the first reaper wears out, his

accumulated funds will replace it. From one point of view we may say that in this way the reaper "replaces itself." But the farmer may, if he prefers, use all of his increased income in the purchase of additional comforts and luxuries for himself and his family. In deciding whether he will replace his capital or increase his present consumption, he will be guided by the same kind of an estimate of the relative importance of present and future wants on the one hand, and of the amount which the capital will add to his income, on the other hand, that guided him in the original saving which led to the purchase of the first reaper.

Similar illustrations can be found in other kinds of undertakings. Many business enterprises have failed because business men have "lived beyond their incomes" — which often means simply that they have not replaced their capital so rapidly as they have used it up. Many American railways have maintained a specious prosperity for many years by paying "unearned dividends"; that is, by letting their capital (roadbed, rolling stock, buildings, etc.) deteriorate through not expending enough of their gross income in the maintenance of their way and equipment.

The stock of capital in existence at any one time is the result of past saving. *But this stock of capital cannot be maintained intact without more saving.* From this point of view we may say that the sacrifice of present satisfactions for future satisfactions which society undergoes in order to reap the advantages of capitalistic production is not something that is done "once for all," but is a continuous sacrifice.

The Shifting of Investment. — As a matter of fact, a large amount of the capital that is used up in production is not replaced, for the simple reason that entrepreneurs find that some particular kinds of capital are not profitable; that is, they do not add enough to the selling value of the entrepreneur's total product to repay them for their cost (including interest and repayment of principal). It may happen that the entrepreneur has been mistaken as to the technical efficiency (or productivity) of his capital, or that he has overestimated the demand for his

products. New inventions or new methods of production may lessen the income-yielding power of part of the existing stock of capital, or capricious changes in demand may have a similar effect. At the same time, these new methods of production and these changes in demand are making new forms of capital profitable. Even if the " replacement fund " were a definite and rigid annual sum, it would not be entirely devoted to replacing the particular kinds of capital that had been used up in production. There would be a continual shifting from the less profitable to the more profitable forms of capital.

We often hear it said that capital is transferred from one industry to another, or from one locality to another, or from one country to another. Such expressions are misleading. Capital goods are not usually transferred in this fashion, although in exceptional cases it may happen.[1] These statements often mean that the *ownership* of capital changes, as when a capitalist sells his holdings in one industry to another capitalist and invests his own funds in another undertaking. The most important way in which " capital is transferred " is through that gradual process of shifting in the forms of investment which has just been described.

The Relation of the Durability of Capital Goods to Investment. — The ease with which investments may be shifted varies for different forms of capital. Especially important in this connection is the durability of capital. As has been already suggested, some forms of capital are destroyed as capital by a single use. The fuel and raw materials used in a manufacturing establishment and the merchant's stock in trade belong to this category. The merchant's stock in trade becomes consumption goods in the hands of consumers; raw materials reappear in the finished product, as do other forms of capital for that matter, although in a less obvious sense. But the fact remains that these particular forms of capital investments yield their services only once, and when they are once used by the entre-

[1] For example, some generally used kinds of machinery (such as lathes, milling or planing machines, engines, or motors) may be transferred from one establishment in one industry to an establishment in another industry.

preneur for the purpose for which they were intended, they cease to be capital, even though they may have successors in new forms of capital.

From such transient forms of capital we may pass by insensible gradations to capital goods which yield a long succession of services, the series culminating in such durable forms of capital as buildings used for productive purposes, or railway roadbeds. If a particular form of capital lasts for exactly a year — the period of time usually taken as a unit in the computation of the rate of interest — estimating the expense of employing such capital is a very simple matter. If, for example, the rate of interest which an entrepreneur sets as his minimum is 6 per cent, he will not invest $1000 in such capital unless he estimates that it will increase his product by an amount that will sell for at least $1060.

In the case of the more transient forms of capital, however, the computation is usually made by taking into account the "rate of turnover." A manufacturer may be constantly buying raw materials and making them into finished products. If the raw materials purchased during a year cost $3000, but if, on the average, only $1000 is invested in raw materials at any one time, the capital is said to be "turned over" three times during the course of the year. The interest rate is computed only on the average amount of capital "tied up," so that interest of 2 per cent on each turnover would amount to 6 per cent on the actual investment of money.

In the case of the more durable forms of capital the computation is more complicated. Here the entrepreneur has to take into account not only the original expense of the capital good and the amounts which it will add to his annual product, but also its durability, and the fact that a large part of the income which it will earn for him is future income. This future income, as we have seen, will not be appraised so highly as the same amount of present income would be.

The Expense and Price of Capital. — When we speak of the cost or expense of capital, we may have in mind either one of two distinct things. We may mean (1) the price paid by the

entrepreneur for the loan of the money funds which he invests in specific kinds of capital goods, or we may mean (2) the prices paid for the capital goods themselves. The first thing is, of coarse, loan interest; the second is simply a matter of the market prices of commodities. It is this second thing — the market price of capital goods — that we wish to consider at this point. As commodities, these capital goods come under the general laws of value and price, and most of what has been said in earlier chapters about the valuation of consumption goods holds just as true in respect to the valuation of these production goods. Their price at any given time is apt to be fixed rather close to the point where demand and supply would be in equilibrium. In the long run their values — if they are not patented products, but are competitively produced — cannot get very far away from the expenses of producing them.

But there is one fundamental difference which has been suggested in other connections. Consumption goods are valued because they satisfy human wants, and the intensity of the wants which particular units of goods satisfy have, through the principle of marginal utility, a very direct relation to their market values. Capital goods do not satisfy human wants directly; they command a price simply because they aid in the production of goods that do satisfy human wants directly. The demand for them, as we have seen, is the entrepreneur's interpretation of the demand for their products. The law of diminishing productivity bears about the same relation to the determination of their values that the law of diminishing utility does to the determination of the values of consumption goods.

As in the case of the demand for labor, the elasticity of the demand for a particular sort of capital goods is affected not only (1) by the fact that the higher the price of the capital, the higher will have to be the price of the product, and, consequently, the smaller will be the quantity of the product that can be sold, but also (2) by the fact that when the price of any variety of capital goods is relatively high, the entrepreneurs

will economize in the use of that particular kind of capital and will use relatively more labor, relatively more land, and relatively more of the other forms of capital. The first of these facts is a corollary of the law of diminishing utility; the second, a corollary of the law of diminishing productivity.

This analysis of the price of capital goods relates, however, only to the supply of *new* capital goods. After capital goods are once definitely installed in industrial uses, its selling value is determined solely by its ability to earn an income for its owner. If the entrepreneur has overestimated the technical efficiency of a machine or the salability of its products, that is, if he has overestimated its income-yielding power, he may find that its money value to him is less than the price he paid for it. Here, however, we have to note an important distinction between *free capital* and *specialized capital.*

Free and Specialized Capital. — By free capital we mean capital that has a number of different possible uses, or that can be transferred from one industry or one establishment to another. Specialized capital is capital that can be used for only one purpose, and that cannot be transferred from one establishment or industry to another. The capital invested in the construction of a railway roadbed, or in the digging of an irrigation ditch, is absolutely specialized. The roadbed and the irrigation ditch are of use only in connection with the particular transportation or agricultural undertakings for which they were constructed. If the undertakings should fail, the value of these specialized forms of capital would be absolutely wiped out. A manufacturing firm may invest a large amount of money in new models of specially designed machinery. If the new machines prove unsuccessful, their value may sink to what they will sell for as scrap iron.

Free capital is found in such forms as tools, machines of the standard models that are used in different establishments in the same industry, or even in different industries; raw materials that can be made up into different kinds of finished products and the like. A farmer who stocks his farm with dairy cattle, but finds his land unsuited for a dairy farm, does not incur a

total loss on his investment, for he can sell his cattle to some farmer who can make profitable use of them.

The distinction here emphasized is only one of degree. We have capital in a considerable variety of forms that are partly free and partly specialized. Such capital is capital that is best adapted to one specific purpose, but which may also be put to other uses. One frequently sees buildings, originally erected for office purposes on a badly chosen site, that have been give over to small manufacturing concerns. A building intended for a factory may serve fairly well as a warehouse.

The importance of these distinctions lies in the fact that the possibility of alternative uses forms a barrier to the depreciation of the selling value of such free capital as is found to yield less income in some particular use than was expected by the entrepreneur. If such goods can yield a larger income in some other use, they can be transferred (through a change in the nature of the entrepreneur's business or through sale or lease to other entrepreneurs) to this more profitable use. Such transfers are continually taking place in actual business.

Capital and Land. — The analysis of the process by which capital goods are priced opens the way for a consideration of a problem that has been suggested in earlier pages, — the reason for the economic distinction between capital and land. Some points of similarity are obvious: land and capital are both valued according to their income-yielding power. The selling value of land, like the selling value of capital, is based in large measure on the capitalization of the prospective income to be derived from it. From the point of view of the individual investor, the purchase of land for productive purposes is an investment of money just as truly as is the purchase of capital goods.

Yet there are equally obvious differences: land is given by nature; capital is "man-made." The amount of land is limited — a statement that holds true whether we have in mind the land actually available for productive uses under existing conditions, or whether we have in mind the whole surface of the earth. The supply of capital, on the other hand,

is capable of indefinite extension. It may be said, of course, that an extension of transport facilities, by which the available supply of land is increased, is a "production of land." This is, however, only a figurative use of the word "production." In this figurative sense the growth of a city, by which barren areas become desirable building lots or factory sites, is likewise a "production of land." The recent opening up of the Canadian Northwest has been due to the production of capital in the form of railways. The land was already there, but the necessary form of capital was lacking. Another distinction is found in the fact that land, in its most essential qualities, is a permanent thing, while capital is of all possible degrees of durability.

These obvious physical differences between land and capital would hardly justify us in drawing a line between them in a discussion of the distribution of wealth unless these physical differences were the causes of differences in the ways in which the incomes from land and capital are determined — differences, that is, between rent and interest. Here, again, we find points of similarity and points of difference. The points of likeness become prominent when we view the mechanism of wealth production as it exists at any given time, but become less significant as we shift our view to the forces at work through a considerable period of time.

If, for example, we could take something like an instantaneous photograph of the processes of the production and distribution of wealth, we would see no important differences between the capital and the land used in production. We would see that society is equipped with a stock of capital goods, in all stages of wear, of all possible degrees of technical efficiency, and varying greatly in fitness or adaptability to the work of producing the particular products that consumers are demanding. Not all of these capital goods are yielding an income that is sufficient to provide for their replacement as they wear out, and in addition to pay a surplus, or premium, in the form of interest. Some, it is true, may be yielding even more than the amount necessary for these purposes. Machinery of new and excep-

tionally efficient sorts, but not as yet of widespread or general use; raw materials or dealers' stocks of goods that, by reason of a sudden increase in demand, are selling at an exceptionally high price, — such capital goods may be earning considerably more than interest and replacement.

On the other hand, we would see a large amount of capital in such forms as obsolete kinds of machines, ill-planned factory buildings, raw materials or dealers' stocks in trade that were bought in expectation of a demand that did not materialize. Such capital goods may earn considerably *less* than interest and replacement. When capital is once *fixed* in definite forms, the question of the original money cost of the capital does not enter into the question of the profitableness of using it. An entrepreneur who borrows money to invest in capital goods has to repay the interest and ultimately the principal of the loan, whether this particular investment of capital proves sufficiently remunerative or not. In accounting practice such expenses are called " fixed charges," because they go on whether the capital is used profitably or not. In fact, the entrepreneur will find it to his advantage to use the capital, rather than to let it lie idle, so long as its use adds anything to his total net income. A machine may thus be worth using, even if not worth replacing; dealers can better afford to sell their goods for less than they paid for them than not to sell them at all; a landlord will prefer to rent a building at a very low cost, rather than to let it remain vacant. Capital goods that are just barely worth using may be called " marginal capital goods," and are, from our present viewpoint, analogous to marginal land. At any given time, then, the existing capital goods which it does not pay to use may be thought of as " below the margin," while the income yielded by the better capital goods may be thought of as a rent of capital, analogous in many ways to the rent of land. For this reason Professor Marshall has called the income from capital goods, when the point of view takes into account only a short period of time, *quasi-rent*.

When, however, we shift our point of view so as to take into account a longer period of time, we see an important difference

between the income from land and the income from capital. We see, then, that society's stock of capital is a shifting thing. On the one hand, it is being continually depleted on account of the fact that, in the process of production, capital goods are being used up or worn out, or because they are in some cases passing for other reasons below the margin of profitable use. On the other hand, the stock of capital is continually being replenished by the investment of savings in new forms of capital goods. Most of these investments merely replace capital that has been worn out or used up, but some, and in a progressive society, a considerable proportion, represent the creation of new forms of capital.

Now, as we have seen, the investment of savings in capital goods is guided by the estimates that entrepreneurs make of the profitableness of these investments, the criterion of the profitableness of any possible investment being its ability at least to replace the principal and provide for the interest on the money invested. When experience has shown that particular forms of capital will not measure up to this standard of profitableness, these forms will not be replaced as they wear out. When certain forms of capital enable entrepreneurs to get any considerable surplus over and above interest and replacement, the tendency will be, so far as competition rules (that is, so far as monopoly, as in the case of patented machinery, does not prevent), to increase the investments in these forms of capital, and in this way to force the earnings of these specially advantageous forms of capital down to the common level of interest and replacement. Just as the expense of producing consumption goods forms a "normal price," to which their actual prices (under competitive condition) continually tend to approximate, so *the expenses incurred in investments in capital form a "normal remuneration of capital,"* toward which its actual earnings continually tend. Similarly, the price of capital, although actually determined at any one time, like the price of land, by its ability to earn an income for its possessor, tends in the long run to approximate the expense of producing capital. This expense includes, it must be remembered, both the

actual money cost of new capital goods and the expense of interest on this money cost. *Normal interest is the interest on absolutely free capital in the form of loanable funds.*

Land, of course, has no normal price, because it has no expense, of production. This difference is not of mere theoretical importance, but has an important bearing upon many social problems. For example, when we take a long period of time into account, no such thing as an " unearned increment " appears in the value of capital. Productivity has to be imputed to capital because its supply is limited by reason of its expenses of production and by reason of the sacrifices involved in waiting, while productivity is imputed to the better lands simply because the supply of them is limited by nature. When we measure rent as a return per acre (or other unit) of land, and interest as a percentage on the money invested, we recognize this fundamental distinction between rent and interest. That rent may be viewed for some purposes as interest on the money value of the land, and that interest may similarly be viewed (at any given time) as a " quasi-rent " of capital goods, does not alter the fundamental nature of the distinction.

We have seen that the shifting of investment by which the earnings of capital are made to tend toward a normal standard is easier in the case of the more transient forms of capital than in the case of the more durable forms. The more durable a capital good, the more nearly is the income derived from it analogous to the rent of land. As was suggested in the discussion of rent, it is not necessary or advisable to draw a hard and fast line between capital and land. Permanent investments of capital in the form of improvements to land may very properly be regarded as land. The farmer who is contemplating installing a drainage system or an irrigation system for his land views such an investment, at the time, as an investment of capital. But when the capital is definitely incorporated with the land in these permanent forms, there is no reason why it should be called capital rather than land. The total income yielded by the improved acres will, in all essential particulars, be land rent.

The distinction which we have drawn between capital and land is not a mere matter of names. It makes little difference whether we call one group of productive agents "capital", and another group "land" or whether we class all of these productive agents together (as many economists do) under the name of "capital." The important thing is that we should see clearly that there is one group of productive agents whose "rents" are determined — in the long run — by the rate of interest on loanable funds, and that there is another group of productive agents whose earnings are not so determined.

Capital and Consumption Goods. — There are also some points of likeness between capital and the more durable forms of consumption goods. The person who buys a piano is not only satisfying his present wants, but expects to get from it a long period of use, extending into the future. The purchase of any durable consumption good is in this way one form of saving for the future. Moreover, such provisions for future wants will not be made unless we feel that present provision for these future wants are important enough to justify us in giving up some possible present satisfaction.

These facts must be taken into account in any full analysis of the valuation of consumption goods, but they do not justify us in obliterating the line between capital and consumption goods. Consumption goods yield directly an income of satisfactions; capital yields a *money income*. A merchant's stock in trade is capital because it will yield a money income to its possessor; when sold to consumers, the same goods become consumption goods because they yield an income of satisfactions. In short, the distinction between capital and consumption goods is based upon one of the most fundamental things in the existing economic system — the fact that the incomes which men receive for the productive services of their capital are money incomes.

Capital and Wages. — In most undertakings wages are advanced to workmen engaged in the production of goods before the goods are sold. A farmer, for example, has to pay his harvest hands and other workmen before he receives any money

from the sale of his wheat. Whether he borrows the amount needed for wages, or whether he pays them out of his own savings, interest on the amount advanced has to be counted among the expenses of production, and the wages advanced are, for the time being, an investment of capital. In most manufacturing establishments a more or less lengthy average period of time elapses between the work actually done by the workmen and the sale of the products of their work. In such establishments a considerable amount of capital is invested in wage advances. This does not mean that we are to consider the laborers as being in any sense capital. For the gradual process by which the raw material becomes the finished product is itself a continuous investment of capital. *All of the various expenses of production are really different ways of investing money in capital goods.* Add to the cost of the raw material all of the expenses (including wages and payments of rent and interest as well) incurred in order to produce the finished product of the establishment, and you have simply the total investment in capital goods in the form of the finished product. A complete inventory of capital goods would include then (in addition to buildings, machinery, etc.) not only raw materials and the finished products that are ready for sale to consumers, but also the products on hand at any one time in a partly finished state. Thus, though the payment of wages is often an investment of capital, it must be remembered that the payment of wages is only one of the ways in which money is invested in concrete, definite, capital goods.

Competitive Investment. — Thus far our discussion has run in terms of the investment of money in what we have just called "concrete, definite, capital goods," to be used in the production of other goods. We have pictured entrepreneurs and capitalists as servants of society, — as investing money in *producing* the things people want and are willing to pay for. But in order to portray some of the essential facts of modern business enterprise this picture has to be modified. Business men are primarily interested in acquisition rather than in production, in making money rather than in making goods. From

the point of view of both the entrepreneur and the capitalist, money is invested to yield an income rather than to increase the aggregate output of consumable goods.

In part, and in very large part, it is true, investments yield an income because they further the production of things that satisfy human wants. Such is the case in general with (income-yielding) investments in agriculture and in other industries where the products of competing establishments cannot be distinguished, one from another, and are sold in a general market where prices are fixed very accurately by general competitive conditions. But there is left a very important field of enterprise in which the entrepreneur may find it worth while to invest large amounts of money in "selling expenses." Put in a very general but roughly accurate way, these expenses are incurred, not in producing things people want, but in inducing people to want the particular things the entrepreneur has for sale. Advertising expenditures are the most obvious form of such investments. Part of the salaries paid to traveling salesmen must also be placed under this head. Sometimes a new establishment will be created, with full knowledge of the fact that it must run at a loss until a demand for its products is developed. Such losses are investments of this type. Two thirds or more of the aggregate expenses of many establishments making patent medicines are selling expenses. And in the manufacture and sale of other products enormous investments are made with the purpose of creating and holding a market for goods marked by particular brands and trade-marks. A noteworthy feature of modern business is the attempt on the part of manufacturers and wholesalers to influence the demand of ultimate consumers through advertising.

From the point of view of the individual competitor such expenses and the expenses of buying or making capital goods are alike "investments." But they are competitive, acquisitive, investments rather than socially productive investments. Their purpose is not to satisfy an existing demand but to *shift* demand from other channels. So far as such expenditures succeed in gaining trade, the capitalized income-yielding power

of a business undertaking will be greater than the "capital values" that can be imputed to the stock of capital goods on hand. These surplus capital values, embodied only in the preferences of consumers for particular products, may be recorded, like other values, in the actual price paid when the business is sold.

This is not to say that all selling expenses are from the social point of view wasteful. Some of the things for which a market is thus created may be better things, judged by rational standards, than the things which they displace. Moreover, scrupulously truthful advertising is frequently a real help to the consumer, perplexed by the range of alternative choices open to him, and often without knowledge of the qualities of competing goods or of their fitness to serve his purposes. But this is only an incidental and by no means a necessary result of these competitive investments. They may sometimes lead to the education of the consumer, but they may also lead to the exploitation of weakness and ignorance. And in either case they are no part of the social process of the "production of goods."

The Flow of Money Income. — We now come to the heart of our problem, — the analysis of the general forces determining the rate of interest. For this purpose we shall find it convenient to examine the general process of the flow of money[1] income. There is a continuous flow of money income through the hands of entrepreneurs, appearing first in the form of the prices that are paid them for their goods, then (neglecting profits) in their own payments for labor, land, and capital, then reappearing in the prices which those who furnish these agents in production pay for other goods, and so on in a continually recurring cycle of income and outgo.

This process is made more complicated, however, by the fact that not all of the entrepreneur's expenses appear directly as rent, wages, or interest. A considerable part, and in many cases (as in mercantile establishments), the largest part of such expenditures is for various concrete forms of capital, — raw

[1] Using the word money in its broadest sense, including such transferable credit instruments as are used in making payments.

materials, dealer's stocks of goods, machines, etc., — and for advertising as well. Here a part of the money income received by the entrepreneur in the form of the prices paid for his own goods emerges in the prices which he pays for the goods sold by other entrepreneurs, and which, in turn, make up a part of their money incomes. But this other class of entrepreneurs — who supply capital goods rather than consumption goods — are subject to the same necessity of expending their money incomes in the payment of wages, rent, and interest, and in the purchase of different kinds of capital goods. To push the analysis still further would obviously lead us only into needless repetition. One important fact, however, appears clearly: If we could trace the expense of producing any consumption good back through all the long series of services and of production goods that have contributed to its making we would find that *this expense reduces itself, ultimately, to rent, wages, and interest,* not counting what remains in the entrepreneur's hands as profits. Part of the flow of money income passes through the hands of a chain of entrepreneurs, but it nevertheless originates in the prices that consumers pay for the things that satisfy their wants and emerges in the form of the payments made for the productive services of land, labor, and capital.

Yet another correction must be made, however, to fit this picture of part of the economic process more closely to the facts. The money which consumers pay for *particular commodities* does not usually constitute the actual fund with which the entrepreneur pays for the labor, the land, and the capital goods used in the production of those particular commodities. Still less does it constitute the actual fund from which the entrepreneurs who supply the necessary capital goods pay their expenses, or from which the expenses of still more remote stages in the process of production are paid. The roundabout, indirect methods which characterize modern production, and which involve the division of the productive process among countless different undertakings, take time. The goods which consumers buy today are the result of a long series of productive efforts extending back indefinitely into the past. Simi-

larly the productive efforts of today avail but relatively little toward the satisfaction of present wants, for they are in large part directed to forwarding, often in the most indirect ways, the production of things that will come to a final fruition in the satisfaction of human wants only in the more or less remote future.

The Annual Product and the Social Dividend. — Viewed in this way the *annual product* of society is something very different from the *social dividend*. The year's work is begun with an equipment of economic goods of all kinds, — finished goods in the hands of dealers and manufacturers, goods in all stages of completion, growing crops, factory and mercantile buildings, machines, and all the auxiliary apparatus of production in a finished or unfinished state. The *annual product* includes all the additions made to this stock of goods, and all that is accomplished in forwarding such goods as are destined for human consumption towards the form, place, and time in which and at which they are wanted. It includes all that is done in a similar way to forward, replenish, and increase the stock of production goods. It includes also all the personal services that command a money payment which are not embodied in concrete goods, but which confer their benefits in the very instance of their performance.

But while the productive efforts of society are thus constantly building up and modifying the stock of economic goods, this stock is continually being depleted in various ways. The instruments of production are constantly wearing out, or are being cast aside on account of the introduction of either more efficient appliances or more efficient methods which utilize other kinds of appliances. Then, too, as the final outcome of this productive process there is a constant stream of finished consumption goods passing into the hands of consumers. The *social dividend* consists of this flow of consumption goods, together with those direct personal services which do not have to do directly or indirectly with the fitting of *goods* for human consumption, but which nevertheless satisfy wants and command a money payment. While the social dividend is to a

large extent the outcome of past work and effort, the annual product is very largely a provision for future wants.

What is the effect of all these considerations upon our analysis of the flow of money income? It still remains true that the money which consumers pay to entrepreneurs is in turn used by them in the payment of their expenses of production, and that the money which they in turn pay to other entrepreneurs for various forms of capital goods is used in the payment of expenses of production. But the prices consumers are paying are for goods, the expenses of producing which have (at least in greater part) already been paid. If we should trace back the expenses of producing the capital goods used in producing these consumption goods our search would lead us into the more remote past, while still further analysis of the expenses of production would discover an increasing number of ramifications running back into the still more distant past. The present flow of money income, originating in the prices paid by consumers, passes, as we have seen, through the hands of a chain of entrepreneurs and in this process gets ultimately into the hands of laborers, capitalists, and landlords. But most of the productive services which are thus remunerated are services which will avail toward the satisfaction of future rather than of present wants. In other words, the prices paid for consumers' shares in the *social dividend* constitute (save for an important exception to be noted presently) the fund which pays for the *annual product. The productive efforts of the past, which satisfy the wants of today, were paid for out of past income, while the present work of producing goods that will be ripe for consumption only in the future is paid for out of present income.* In this fact lies the kernel of the interest problem.

Investment a Cumulative Process. — Not only, as we have seen, does the entrepreneur invest in such things as machines and buildings, but his purchases of raw materials, his advances of wages to laborers, the interest which he pays on borrowed capital, the rent or the purchase price which he pays for land, and his various competitive selling expenses are also investments. No such investments can be regarded as remu-

nerative unless the entrepreneur gets in the selling prices of his products enough to provide interest upon such outlays as well as to cover the outlays themselves. These facts have already been noted, but at first, for simplicity's sake, we confined our analysis to the capital expenditures of the individual entrepreneur. The full significance of the rôle which capital plays in production does not appear until we view the activities of the individual entrepeneur as only a link in the continuous chain of activities that make up the productive process.

The point of special significance in this connection is the fact that the finished products sold by some entrepreneurs constitute the capital goods (raw materials, productive appliances, advertising media, etc.) bought by other entrepreneurs. When one entrepreneur sells his products to another entrepreneur his period of "waiting" is completed, so far as his advances of money funds in the production of these particular units of goods are concerned. But the "waiting" is only transferred to the other entrepreneur, who adds further expenditures of money and, in turn, gets his remuneration from the sale of his product. The important conclusion to which this analysis leads is that (so far as the entrepreneurs have been accurate in their estimates) the prices which consumers are paying today for finished goods cover not only all the actual money expenditures which have been made in the past in the production of these goods, but also the interest on all such expenditures from the time they were made up to the time of the sale of the finished goods to the ultimate consumer.

Similarly the expenditures made by entrepreneurs today in the production of goods that will directly or indirectly satisfy future wants must (so far as these entrepreneurs and those who will control the remaining steps in the productive process are accurate in their estimates) be covered, together with accrued interest, by the prices which consumers will pay in the future. Present wants are satisfied by means of the productive efforts of the past. These productive efforts were paid for out of past income, but the outlays were made in the expectation that present prices would suffice to repay them, with interest. A par-

ticular entrepreneur may be interested only in disposing of his products at remunerative prices to the entrepreneurs who stand next to him in the productive series, but this does not alter the essential nature of investment, which, from the social point of view, is a cumulative process.

The Sources of Investment Funds. — The gross money income of entrepreneurs furnishes by far the most important part of the current supply of investment funds, and the most important form of investment is found in the entrepreneur's customary practice of "putting money back into the business." That this way of investing money is customary, even habitual, does not mean that the amount as well as the particular forms of such investments is not a matter subject to the discretion of the entrepreneur. So far as the entrepreneur is not hampered by contracts (with customers, other entrepreneurs, money lenders, landlords, or laborers) he is free to do as he pleases with his income. As a matter of fact he is likely to devote a fairly constant proportion of it to the replacement of the capital goods that are being used up or worn out and to the other necessary expenses of continued production.

It rarely happens, however, in any undertaking, that income and expenditure are so nicely adjusted and so evenly distributed through the year that the one always suffices to provide for the other. A temporary surplus may be followed by a temporary deficit. Transfers of goods on credit, helped out by the institution of banking, smooth over some of these irregularities. Moreover, while the entrepreneur need not continue to renew his capital investments unless he chooses, he is at liberty to do even more than this if he deems it advisable. That is, his profits — the excess of his gross income over and above his current and normal capital expenditures — may be used for additional capital expenditures.

Still another source of capital funds is found in the rent, wages, and interest into which, as we have seen, the expenses of production ultimately resolve themselves. For so far as these forms of income are saved by their recipients, rather than expended immediately for consumption goods, they may be lent directly or

through savings institutions to entrepreneurs. This is the important exception, previously mentioned, to the statement that " the prices paid for consumers' shares in the social dividend constitute the fund which pays for the annual product." The truth is that as the flow of money income passes from entrepreneur to entrepreneur, a part only, although the larger part, is put into expenditures for gain. The residuum is used by entrepreneurs in paying for their own shares in the social dividend. In much the same way the money income received by those who furnish labor, land, or capital is only in part paid back to entrepreneurs in return for consumption goods, the residuum being put (through loans to entrepreneurs) into expenditures for gain.

The Interest Rate. — It will be seen, then, that as the flow of money income passes through the hands of entrepreneurs, laborers, capitalists, and landowners, it is divided into *two streams*, one of which goes to pay for the present goods that have been produced in the past, while the other goes to pay for the present expenses of forwarding the production of goods for future consumption. This division represents a kind of social balancing of possible present satisfactions over against the larger future satisfactions which the productive use of capital makes possible. On the one hand we have the entrepreneurs' estimates of how much specific amounts of capital funds are worth to them,— estimates which involve judgments as to the amount of salable product dependent upon the use of these specific amounts of capital funds, the prices that can be got for such products, and the period of time that will elapse before they will be remunerated for such investments. On the other hand we have the judgments of those who supply capital funds as to the relative importance of future and present satisfactions. The interest rate will normally be fixed, of course, at a point where the supply and demand of money funds for investment will be in equilibrium.[1]

[1] Short-time fluctuations in the interest rate are dependent very largely on the condition of bank reserves. This relation has been explained in the chapters on money and banking. In the long run, however, it is the " supply of waiting " that is the important thing.

The process of production involves the expenditure of rent, wages, and interest for returns of all possible degrees of futurity, and a consequent comparison and balancing of the productivity of investments for shorter and longer periods of time. That is, social estimates [1] of productivity are estimates of the relative importance of the ultimate products, realizable at different periods of time in the future, that are dependent upon specific present expenditures in the form of rent, wages, or interest. Or, in other words, *there is a continuous effort to make the most advantageous of all the various possible combinations of land, labor, and waiting.* For just as rent, wages, and interest are the ultimate expenses of production, so the ultimate factors in production may be said to be land, labor, and waiting.

The entrepreneur bases his demand for investment funds upon his estimate of the demand for his products, together with his estimate of the relative economy of the use of methods calling for greater or less degrees of "roundaboutness," involving different amounts of *waiting* on the part of himself and of others who supply him with investment funds. This means that the interest rate is itself one of the factors determining the demand for waiting. The higher the rate of interest, the greater will be the expense of using roundabout methods, involving much waiting.

The supply of waiting varies with the interest rate. Other things being equal, the higher the interest rate, the larger will be the parts of money incomes that will be saved rather than spent immediately in the satisfaction of wants. It has sometimes been said that saving increases as wealth increases. If this is taken to mean that the larger the income of the individual, the larger, other things being equal, will be the amount he will save, the statement probably expresses a general truth. The larger the income, the less important are the immediate wants dependent for their satisfaction on a given *amount* of money. It does not follow that the *proportion* of the income that is saved is apt to be

[1] By "social estimates" of productivity we mean only the net outcome of the individual estimates of all the different individual buyers and sellers, lenders and borrowers.

any larger in the case of a large income than a small income. If, on the other hand, the statement is taken to refer to the increase of wealth in society at large, we have to take account of the fact that as wealth increases new wants develop, and the net effect on saving is apt to depend on the character of the new wants, — whether they call for increased current expenditures or whether they involve the accumulation of considerable sums. Convenient opportunities for saving, such as those afforded by savings banks, insurance companies, and the supply of convenient forms of investment securities have (apart from the rate of interest they offer) an important effect upon the amount of saving.

Gross Interest and Net Interest. — Net interest is pure interest — the amount actually necessary to recompense marginal waiting. Gross interest — the interest actually paid on loans — includes payments for other things. In the first place, actual interest often includes some payment for the supervision which the capitalist has to maintain over his investment. Even the man who " lives on his income " usually has to devote a certain amount of time to the investigation of the safety of different possible investments, to the collection of interest and principal and similar things. The net earnings of savings banks — the difference between the interest they get on their investments and the interest they pay their depositors — are partly a payment for this element of supervision.

A second element in gross interest is the payment for the risk the lender undergoes of losing all or part of his expected return (including principal and interest). This does not mean, as some writers have said, that the interest rate contains an element of insurance, for insurance means the elimination of individual risk through the combination of risks. The fact is simply that, as every one knows, lenders will not take greater risks without the prospect of greater gains. There is some element of speculation in all loans but the very safest, and the extra income received on the more legitimate loans is *profit* rather than insurance.

Usury Laws. — Interest is one form of price in regard to which society still expresses some distrust of the operation of un-

hindered competitive forces. Only nine American states do not provide a legal maximum above which the interest rate cannot legally be fixed. Such laws are based on the justifiable assumption that the borrower is in many cases the weaker bargainer, pressed often by that necessity which "never drove a good bargain." In many places the laws are not enforced, but elsewhere they have an important effect on some kinds of loans, especially bank loans in the rural districts, — farm mortgages and overdue book credits. It is to be feared, however, that their result is often not so much to lower the rate of interest as to cut off many loans which lenders would not be justified in making except at high rates of interest. In the case of many loans on fairly good security, however, usury laws have probably operated to the advantage of the borrowers.

QUESTIONS

1. Could a socialist state dispense with interest? with waiting?
2. How has the rate of interest been affected by the opening up of new and fertile lands?
3. Use supply and demand curves to illustrate the determination of the rate of interest.
4. Is a rented house capital or a consumption good?
5. Analyze the effect of an increase of expenditures for present goods upon present and future social dividends.
6. If money wages could be suddenly increased by 10 per cent would there be a corresponding increase in real wages?
7. Are the roulette tables at Monte Carlo capital? Is a burglar's jimmy capital? Is a battleship capital?

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CHAPTER XXV

PROFITS

The difference between the total money income which an entrepreneur receives and his expenses of production constitutes his profits. Profits, then, are a surplus over and above the expenses of production. There are two ways of measuring profits: first, with reference to some unit of time, such as a year; and, second, with reference to particular units of product. Thus, when a manufacturer speaks of his profits during a year, he has in mind the difference between his total expenditures and total receipts for that year. But when he speaks of his profits on a particular sale, he has in mind the difference between the expense of producing and selling the particular goods sold and the prices received for them. The two ways of measuring profits are not alike, because a large part of the expenses incurred by an entrepreneur in any given year may be payments for work done in connection with the production of goods that will not be marketed until some time later. In the long run, however, the amount of annual profits will be determined by the profits on particular transactions or on particular products, so that for present purposes it is not necessary to press the distinction any farther. It is sometimes more convenient to use the word "profits" in one sense, and sometimes in the other sense.

Profits, being a surplus, do not constitute a homogeneous income determined by any one principle or set of principles. They are the resultant of all the forces that tend to bring about inequalities between the prices paid for things and the expenses of producing them. It is not possible in a brief analysis even to attempt to break up this mixed form of income into all of

its constituent parts. But we must distinguish between two different elements in what are commonly called profits, namely *entrepreneur's wage* and *pure profits*.

Entrepreneur's Wage. — This element in profits is sometimes called the "wages of management," and constitutes the payment received by the entrepreneur for his services as manager or supervisor of his business. It is not easy to draw a line between this element in profits and wages. In fact, "entrepreneur's wage" could be discussed just as appropriately under the general head of wages as in connection with the general subject of profits. The only distinguishing things about this particular kind of wages are that, unless the entrepreneur adopts the bookkeeping form of paying wages to himself, they come out of the general surplus or residuum commonly called profits in actual business, and that they are the wages paid for a particular kind of labor.

The average American farmer usually does a certain amount of work himself that might be done by hired laborers, and so far as his income represents the amount he saves by doing such work himself, it is to be regarded as ordinary wages. But in addition, he does other work of a more purely managerial quality, including the general direction of the time and methods of tillage and harvesting, the organization of the working force; in fact, the determination of what may be succinctly described as the general coördination of labor, capital, and land. The reader may ask: Could not this part of the work be turned over to a salaried foreman? Certainly, and in some cases, as on the estates of so-called "gentlemen farmers," all of it. In fact, the amount of the managerial work actually done by the entrepreneur himself in any kind of undertaking is a variable quantity, depending upon the extent to which managerial authority is delegated to foremen, superintendents, and salaried managers. In the case of corporations practically all of the actual work of management is intrusted to officials and employees whose salaries are counted among the expenses of operation. In any case the "wages of management" exist, although they do not always exist as "entrepreneur's wage,"

nor do they always constitute a part of what is called profits in the accounting of the enterprise.

Even in cases where the entrepreneur is in all respects his own manager (which is, after all, the most frequent case in a host of small business undertakings), the entrepreneur's wage constitutes a kind of *minimum profits*, and is in reality a part of the expenses of production. Minimum profits are necessary profits, the money price needed to induce the entrepreneur to engage in and continue his work. They can be measured roughly by the salary which the entrepreneur could get by working for some one else. Some men would prefer to be their own masters even at a smaller income, while others would shrink from the responsibilities of independent business life, even if a larger income were attached to it, so this method of measuring minimum profits is only approximate.

Minimum profits will vary with managerial efficiency. The more efficient farmer will get a larger product with a given equipment of land, labor, and capital than will the less efficient farmer. So will the more efficient manufacturer. Differences in managerial efficiency will cause corresponding differences in minimum profits.

Pure Profits Impossible under Certain Conditions. — It will help us to get a notion of the meaning of pure profits and of the sources from which they are obtained if we pause to consider the conditions under which they could not exist. Under what conditions would the selling prices of goods always be just about equal to the expenses of producing them (including the wages of management)? Under what conditions, in other words, would market prices always be kept approximately equal to *normal prices?*

The first prerequisite, it is clear, is a very complete and perfect state of competition. Capital and labor would have to be so fluid that they could be shifted from one employment to another to take advantage of the slightest possible differences in gains. In the second place, it is not sufficient that business men, capitalists, and laborers should be quick to take advantage of their opportunities; they would have to *know* their

opportunities. Full knowledge of the relative advantages of different occupations, of different employments, of different investment opportunities, of different fields for business enterprise, would always have to exist. Consumers, too, would have to be always alert to take advantage of any slight differences in the prices of competing producers, or in the quality of their goods and services. Moreover, their tastes and preferences with regard to the things they consume would have to be constant, or at most could change but slowly. Similarly, the introduction of new inventions and other new ways of producing things must be ruled out.

In short, if economic activity were sheer routine; if each business man, hard pressed by an alert and well-informed competition, had no opportunity before him except to produce standardized products for a dependable market, pure profits would be quite impossible. The able business man could get a larger income than his fellows only by getting a larger product for a given expense for labor, capital, and land. Paying the same prices for these productive agents as his competitors, selling the same kinds of products at prices identical with theirs, only as he gets a larger product for a given expense, only, that is, as he is a more efficient *manager*, can his gains be larger than theirs. His profits are limited to his wages of management. So smoothly and perfectly would the routine of the economic process operate that there would be no field for what is, in reality, merely another name for profit seeking, — *business enterprise*.

The Sources of Pure Profits. — Pure profits exist because competition does not work perfectly; because people do not always know and are not always alert to seize the most advantageous course open to them either as producers or as consumers; because there are such things as fads and fashions and changes in the quantity and quality of wants; because the system of competitive prices is not a thoroughly consistent structure; because, in short, room is left for business enterprise.

Take, for example, a very simple case. A owns a house, which he is willing to sell for $5000. B is willing to pay $6000

for just such a house, but neither A nor B knows the other or the other's position as a buyer or seller. C, knowing the situation, buys from A for $5000 and sells to B for $6000, gaining a profit of $1000 for himself. This profit, it is obvious, is made possible only by the lack of complete knowledge of the situation on the part of A and B. The transaction is without risk to C, who merely takes advantage of this specific instance of the general fact that for many classes of goods competition fails to set a definite market price.

Next, assume that the purchaser, B, has bought the house merely for the sake of selling it again, if possible, at a profit. He may have reason to believe that there will be an increase in the demand for houses or in the expense of building them, so that he counts on finding a buyer who will pay more than $6000 for the house. If he succeeds, it will be because the general market situation, so far as houses are concerned, will have changed in accordance with his own forecasts. He takes the risk of loss, but this does not mean that he is blindly "taking a chance." On the basis of present facts he reaches certain conclusions or judgments with respect to future *probabilities*. He cannot eliminate risk, but can select what seems to him to be a *favorable* opportunity. His profits — if he gets them — are to him the result of successful risk-taking.

These two methods of getting profits, employed by C and B, respectively, indicate the two general sources of profits: (1) inconsistencies, incomplete adjustments, in the general price situation as it exists at any one time; (2) *changes* in the general price situation. But (3) in most business operations these two sources of profits are blended. And yet there are many transactions which are like those suggested in our illustration in that profits are derived entirely from one source or from the other.

1. We shall consider first those transactions in which buying at one price and selling at another are for the profit-seeker practically simultaneous operations. Risk, *on the individual transaction*, is eliminated. But there remains the risk that, if one makes this type of profit-seeking one's vocation, one's aggregate gains may not amount to enough to compensate

one for one's incidental expenses and for the use of one's time.

Profits of this kind are found in many real estate operations, in some transactions conducted by brokers in different fields, in arbitrage transactions in foreign exchange or securities or produce, and, naturally, in a large variety of miscellaneous isolated transactions. There is no reason to believe that the aggregate amount of pure profits of this sort is large. Where large margins may exist between buying and selling prices (as in the case of land, works of art, and other non-reproducible goods) or where the aggregate volume of transactions is so great as to make even small differences in prices significant, intermediaries and go-betweens multiply, and competition tends to pull their (annual) profits down to an entrepreneur's wage, or less.

2. More important as an *independent* source of profits is the difference between the price situation at any one time and the price situation at some later time. A very common profit-seeking operation consists of buying things now in the hope of selling them at a higher price in the future, or of selling things now (for future delivery) with the expectation of securing them at a lower price in the future. The larger part of "speculation" in real estate, in produce, and in securities, is profit-seeking of precisely this type.

Risk always attends such operations. The speculator may prove to have been mistaken in his analysis of the general situation, or new and unforeseen factors may enter. Prices may move in a direction opposite to that on which the speculator had counted, and losses rather than profits may result. This may, for example, be caused by competition in profit-seeking. Other speculators will in most cases have seen the same opportunity for profits. By buying now in large quantities for speculative purposes they are sure to increase present prices. Similarly, by selling at a later date they are equally certain to make prices then lower than they otherwise would have been. The chief economic service of speculation, in fact, lies in its tendency to lessen fluctuations in prices. But the thing may

be overdone: future prices may be forced down to a point where the expected profits are turned into losses. And, *mutatis mutandis*, the same considerations hold true of "bear" operations, on the other side of the market. The possibility of being caught in a price movement of this sort, resulting from over-speculation, is one of the ordinary risks of this kind of profit-seeking.

3. In most cases, as we have said, the two general sources of profits are blended. The great mass of business transactions are not so simple as those we have just considered. Profits are sought, not merely by buying one thing and then selling it, either immediately or at some other time, but also, and more generally, by buying certain things and then using them, combining them, in such a way as to get a *new* salable product, or at least a product to which new qualities have been added. Returning to the illustration of the house, we may assume that it may have been *built* to sell, and the things bought were, in the first instance, labor, building materials, and advances of funds with which to make payments. Or the house might have been built by a contractor, who first sold the house (for "future delivery") and then bought the labor and material and advances necessary for its construction. And so in agriculture, manufactures, and commerce generally: the entrepreneur buys some things — labor, land or its use, capital goods in various forms, advances of loanable funds — and sells other things — the commodities or services that are his "products."

The inconsistencies and maladjustments in the general price situation of which he tries to take advantage are, in short, the differences between the prices he has to pay for the things he uses in making and selling his products and the prices he gets for his products. If competition worked with absolute promptness, smoothness, and efficiency, things would sell at prices equal to their expenses of production, and the most the entrepreneur could get would be, as we have seen, his entrepreneur's wage.

The time element, involving the possibility of gains (or losses) from price changes, also enters in, because most of the expenses

of production are incurred either before or (in the case of contracts for future delivery) after the price which can be got for the product is finally determined.[1]

Marginal Productivity and Profits. — In our discussion of the law of diminishing productivity [2] we took no account of pure profits. We saw that in any undertaking a definite part of the product had to be imputed or attributed to each productive agent, and further, that the amount of product so attributed to any unit of a productive agent was the amount *dependent* upon the use of that particular unit. But this does not mean that in any undertaking the sum of those parts of the product which have to be imputed to particular productive agents will exhaust the whole product. Moreover, it is not wholly correct to think of the product as being created by the "application" of labor and capital to land or of land and capital to labor.

In any business undertaking, the one thing always given or fixed (at any one time) is the general object of the undertaking, the business scheme, the productive or acquisitive plan of the entrepreneur. In carrying out his plans, in securing a product and a market for it, the entrepreneur has to utilize productive agents. In combining them, in *applying them to his general profit-seeking plan*, he encounters the law of diminishing productivity, and, normally, pushes each particular kind of expenditure up to the marginal point. If he is successful there will be a surplus over and above his aggregate expenses. That is, his total product will more than cover the "specific products" that have to be imputed to the various productive agents he utilizes. This surplus, of course, is his profits.[3]

[1] Entrepreneurs are often able to eliminate or shift part of this price-fluctuation element in profits (with its accompanying chance of loss). The building contractor may, for example, contract for his materials when he enters into a contract to build a house. Manufacturers of flour and of raw cotton, as well as grain and cotton buyers, are able largely to shift the risk of price fluctuations to professional speculators by means of the process known as "hedging," which will be described in Chapter xxix.

[2] See Chapter xix.

[3] Although the present chapter is concerned only with profits in competitive undertakings, this analysis of the relation of profits to the law of marginal productivity holds true also of monopoly profits.

Profits for the Industry and Profits for the Establishment. — We must note at this point an important difference between the production of standardized goods — where one establishment's product is like another's — and the production of goods or services which are marked off or distinguished as the output of particular establishments.

In agriculture, for example, standardized products are produced for a general market. If certain farmers make larger incomes than their neighbors it is generally because they are more efficient farmers and earn a larger entrepreneur's wage. This may show itself in two ways. First, a good farmer will get a larger product with a given expenditure. He will apportion and use his productive agents to better advantage. Second, because he gets a larger product by means of a given expenditure, he will be able to push his expenditures further before coming to the margin beyond which it will not pay him to go. That is, he can advantageously "farm on a larger scale" than his less efficient neighbors. But while these advantages increase his entrepreneur's wage, they do not, in themselves, create pure profits.

If the farmer gets pure profits it is because he has successfully tried some new crops or some new methods, or because he has been individually fortunate in some other way, or because he *and other farmers* have been able to sell their crops at profitable prices. This last point is the important one. In agriculture and other industries producing standardized products for a general market, by far the most important profits (and losses) are those which come to the industry *as a whole*. Except for the effect of such things as local droughts or frosts or blights, when the wheat growers of the country prosper they prosper together, and when they lose they lose together, — and so with the corn growers and the tobacco growers and the cotton growers. Wars, tariffs, crop failures abroad, — these and other things like these will affect the demand for their products. The supply will depend in part upon weather conditions, but more largely upon the amount of these crops that farmers *as a group* have thought it worth while to plan to grow.

These conditions of supply and demand are absolutely beyond the control of any one individual producer. A succession of profitable years is sure to result in an increased output, with lower prices and lower profits. In agriculture, as everywhere, there are rewards for the efficient and energetic producer, but, with minor exceptions, his chances of getting pure profits are dependent upon the fortunes of the industry as a whole.

In the fields in which each entrepreneur can mark off his product or his establishment as his own, we find a very different situation. The manufacturer or jobber who can in some way identify his products by special brands, and the retailer, dealing directly with the consumer, are able to secure pure profits (and to run the risk of corresponding losses) on their individual undertakings, over and beyond such profits and losses as may come from general business fluctuations.

Here also the entrepreneur is limited by the law of diminishing productivity, and here also he normally pushes his expenditures of all kinds up to the margin. And (if he is his own manager) he will get a larger or smaller entrepreneur's wage according as he can get a larger or smaller product per unit of expense. But many of his expenses will be what we have called " competitive investments," that is, they will be devoted to creating a market for his products rather than to creating the products. The quantities that he can profitably produce and, within limits, the prices he can charge, will be determined very largely by his success in inducing purchasers to prefer his goods or his store to others. The profits of cotton growers are directly conditioned, as we have seen, by the aggregate demand for cotton and the aggregate supply of cotton. But with the retail dealer and with the manufacturer of breakfast foods or canned fruits or clothes or soap or motor cars or fountain pens or almost any other kind of branded merchandise, profits depend very largely upon the *preference* of consumers for one store or for one make of goods. The getting of profits is not merely a matter of indirect competition among industries; it is a matter of direct competition among individual establishments. One competitor may gain while others in the

same field are losing, and may gain even in the face of a generally unprosperous condition of business.

Good-will. — It very often happens that the entrepreneur who has developed his business to a profitable point is able to attach some degree of permanency to his profits. A merchant often relies to a very considerable extent upon the patronage of an established clientele of customers, and he in turn may prefer, other things being equal, to purchase his goods from particular wholesale houses. Manufacturers and wholesalers, too, try to build up a habitual preferential demand for their products. When a business undertaking is sold as a whole, its established connections of this sort enter into the price paid for it, under the head of "good-will." This good-will element is generally measured by the difference between the selling value of the business as a whole and the selling value imputed or ascribed to its specific assets in the form of capital goods and accounts receivable (minus its specific liabilities). In the sale of a newspaper it often happens that its good-will (its established advertising and subscription patronage) is the only thing actually transferred. This does not mean, however, that the selling price of the good-will of an establishment necessarily corresponds to a capitalization of its pure profits. The good-will may be, in individual cases, very much less than the aggregate amount of the expenses incurred in the past in the effort to build it up. And when once sold at a fair price, the purchaser acquires no peculiar power of getting unusual profits. For him the price paid for good-will is an investment, and he has to deduct interest on the investment before he can count his income as profits. In short, he has to start afresh, with no differential advantage.

Good-will is to be attributed, in large measure, to the economic inertia and friction which result from the fact that buyers are guided to a very large extent by custom and habit rather than by conscious choice. However, in many small transactions, for customers to attempt to buy always at the lowest price would result in a waste of time and energy disproportionate to the gain. Hence, aside from the influence of custom and habit, there may

often be rational ground for the continued patronage of particular establishments and the continued purchase of particular goods which customers have found to be trustworthy.

The Relation of Risks to Profits. — Profits differ from other forms of income in the degree to which they are contingent upon successful risk taking. But risk taking, in this sense, as we have seen, does not mean a blind dependence on chance. Chance is, of course, an element in profits. Capricious changes in fashion often bring temporarily high profits to dealers who happen to have the right kinds of goods in stock, or to manufacturers who happen to have the equipment needed to produce the right kinds of goods. And other examples will suggest themselves to the reader. But there are chance losses as well as chance gains, and there is no reason to believe that they are not quite as numerous and important. Chance gains, therefore, do not constitute any important part of the income going to entrepreneurs as a class, but they may often be a considerable element in the profits of a particular entrepreneur.

Risk taking is nearly synonymous with business enterprise. It involves careful estimates of the amounts of product that can be got from different combinations of labor, capital, and land, and equally careful estimates of the salability of such products. It is in this latter field, which involves the diagnosis of market conditions with a view to ascertaining their probable trend, as well as the possibility of affecting them to his advantage, that an entrepreneur's skill finds its chief opportunity. Yet, though he may deal with probabilities rather than with possibilities, he is nevertheless a risk taker. His estimates have to do with market conditions that are often entirely beyond his personal control, and which, at best, he can influence only by efforts directed to that end, — by expenditures that may prove to have been wasted.

To anticipate consumers' demands correctly is not in itself a guarantee of profits to any entrepreneur. If other entrepreneurs have counted on the same demand, it may easily happen that the total product cannot be sold at a profitable price. In fact, the "market conditions" which the entrepreneur has to forecast

include the conditions of supply as well as of demand. But even in case a given entrepreneur has succeeded in producing the precise things that consumers are demanding and other entrepreneurs are not producing, and has thus been able to get large profits, he cannot count on their permanence. Demand may change, but even if demand remains constant or increases, his large profits will be a standing invitation to other entrepreneurs to enter the same field, — a condition which will continue until competition forces the profits of this particular kind of business down to where they just suffice to pay the wages of management. If the product can be marked off, or distinguished in some way, good-will may be built up, as we have seen, so as to give some degree of permanency to profits. But even here the entrepreneur has to guard against the inroads of other business men, seeking to win trade for their own products. In some few cases profits are secured without risk; some (not all) kinds of risks can be eliminated by insurance or shifted to some other risk taker; but, in general, profit seeking and risk taking go hand in hand.

The Entrepreneur. — We have, for convenience, spoken of "the entrepreneur" of an enterprise. We have also assumed that general managership and supervision of the undertaking is in the entrepreneur's hands. But the reader has been warned that all managerial duties may be, and often are, delegated to salaried employees, and that the entrepreneur may also be capitalist, landlord, and laborer. Most American farmers are all three. And most entrepreneurs in other fields supply a part of their own investment funds. But who, in a particular enterprise, is "*the* entrepreneur"?

The entrepreneur is the "business man," as distinguished from the capitalist, the laborer, or the landowner. He is, more specifically, the one who profits if a business undertaking succeeds and who loses if it fails. Now it is clear that more than one person may lose if a business undertaking fails, — or others than the common stockholders, often regarded as "corporate entrepreneurs," if the business is incorporated. Bondholders, other creditors, laborers even, may also lose. The fact that the bond-

holders are preferred creditors may limit their losses, but does not necessarily safeguard them from losing. The fact is that every one who has *risked* something on the success or failure of a particular business undertaking is, *in that degree*, entrepreneur. The capitalist who buys $5\frac{1}{2}$ per cent bonds instead of virtually riskless $3\frac{1}{2}$ per cent bonds, or who buys 7 per cent preferred stock at par, the money lender who has no security other than the prospective earnings of the business, the laborer who chooses a well-paid but uncertain employment to a surer but lower-paid one, are all profit-seekers. If the business undertakings in which they thus coöperate succeed, they share in the profits, up to a stated amount; if these undertakings fail, these various co-operators lose, in larger or smaller amount. Their profits, if they get them, are surpluses over costs, the costs being measured by the interest and wages that they could have obtained in virtually safe alternative employments. Wherever in economic life one finds successful risk taking, there one finds profits. The " individual entrepreneur " and the holder of common stock merely assume a relatively larger burden of risk; have the opportunity of reaping, in case of success, correspondingly larger profits; and usually exercise a correspondingly larger measure of responsible direction of the policies of the undertaking.

Profits and the Justification of the Competitive System. — It is the desire to get money profits that leads entrepreneurs to produce particular things and to produce them in particular ways. It is for this reason that old channels of productive effort are continually being abandoned, and that the use of labor, capital, and land is continually being guided into new channels. The shifting of productive effort which the pursuit of money profits involves consists, for the most part, of efforts on the part of entrepreneurs to meet the shifting wants of consumers.

One of the strongest arguments for the superiority of the competitive system over any possible substitute for it lies in the claim that, under competition, the guiding of production into the channels indicated by the search for money profits will result in

the maximum satisfaction of human wants. This seems to follow from the fact that the prices people are willing to pay for certain commodities measure the importance which they attach to the possession of those commodities. The shifting of labor and capital from less profitable to more profitable uses means, in general, that more intense wants will be satisfied with the same expenditure of productive energy. All this is implied in the statement made above that the shifting of productive effort is mainly in response to the changing wants of consumers. This argument, that under free competition the pursuit of money profits leads to the best adaptation of productive efforts to the satisfaction of the wants of consumers, is one that has rarely been squarely met by those who attack the competitive system. There are, however, several important considerations that lessen to some extent its force.

In the first place, the extent to which the wants of any individual affect the ordering of the productive process depends upon his purchasing power, that is, primarily, upon his income. It is manifestly absurd to say that the shifting of labor and capital from the production of necessities for the poor to the production of luxuries for the rich, simply because it may be more profitable, necessarily means a better satisfaction of human wants. The extent to which wants are satisfied depends on the way wealth is distributed, as well as upon the amount and kinds of things produced.

Moreover, even granting that the stimulus of money profits leads to the best practicable satisfaction of the wants of present consumers, this may sometimes be achieved by imposing added difficulties in want-satisfaction on future generations. The lines of procedure that will bring maximum profits to entrepreneurs sometimes run counter to the more permanent interests of society. We all recognize, for example, that there may be such a thing as a too rapid exploitation of natural resources. The history of timber lands in America furnishes an instructive example.

A still more important qualification of the statement that competitive profit seeking works for the best interests of society,

viewed as a body of consumers, is found in the fact that when we begin to speak of the interests of society, we introduce, of necessity, the ethical point of view. This means that we must consider not only the *quantity* but also the *quality* of want-satisfactions. For purposes of the economic analysis of market forces, we make no distinction between different kinds of wants, but it is impossible to discuss social well-being without taking into account the fact that from the point of view of the interests of society some kinds of want-satisfactions are good and some are bad, and that even the better kinds of want-satisfactions vary greatly in their importance, when measured by any rational criterion of social welfare. The production of socially undesirable things, such as intoxicating liquors, adulterated foods, ill-ventilated tenements, etc., is often prohibited, while, on the other hand, society has found that certain socially-desirable things, such as schools, parks, libraries, clean streets, etc., will not be supplied at all, or will not be supplied in sufficient quantities by private business enterprise. All indications point to a very considerable extension of organized social activity at precisely those points where the private pursuit of money profits has proven itself inadequate.

QUESTIONS

1. Are profits as defined in accounting identical with profits as defined in economics?
2. Is there a sense in which pure profits can be said to be a reward for productive services? If so, should they be counted among the expenses of production?
3. In what way are the profits of a retailer attributable to "inconsistencies and maladjustments in the price situation"?
4. Does a monopolist push his expenditures of all kinds up to the marginal point?
5. What industries, aside from agriculture, produce "standardized products for a general market"?
6. Some economists speak of the "profits on capital." Others speak of profits income secured by *personal* exertions. Which form of statement is correct? Are the two necessarily inconsistent?
7. Is good-will capital?
8. If there were no economic risks, would profits be possible?

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CHAPTER XXVI

THE PERSONAL DISTRIBUTION OF WEALTH

In the present chapter we shall study the distribution of wealth and income among individuals simply as individuals, and not as agents of production or owners of productive agents. What is the cause of large fortunes? Is the middle class disappearing? Can we abolish poverty? To begin with, certain distinctions must be clearly drawn.

Wealth and Income. — The distribution of wealth and income should first be distinguished from the distribution of final consumption. We may have in mind simply the enjoyment of material things and services. A man of vast possessions may be very frugal in his consumption, acting with respect to most of his property simply as a trustee for society. But when we are interested in social classes, industrial democracy, and personal power and independence, the distribution of wealth or income is important, no matter how frugal the owners of large wealth may be.

Absolute and Relative Well-being. — Two entirely independent inquiries are very frequently confused. (1) We may wish to know whether the condition of the mass of the people is getting better or worse. Do they have more or less of the good things of life than their ancestors had? But we may also ask, (2) What share of the total product of industry is received by each section of the community? Which section is gaining upon the others? If A and B divide a catch of ten fish equally today, and if to-morrow A gets ten out of a total catch of thirty, then absolutely his income has increased, but relatively it has declined.

Concentration of Wealth and Large-scale Production. — It is perhaps worth while to warn the reader against confusing the

question of large and small fortunes with the question of large and small scale production. However improbable, it is at least conceivable that there might be an equality of property with production carried on largely as it is today; for we have but to imagine an equal distribution of holdings of stocks and other equities in business enterprise.

Methods of Measuring Concentration of Wealth and Income. — How shall we tell whether the middle class is tending to disappear? A common method is to make a classification of wealth and income, and then to compare the number of persons in each class at different dates. The unreliability of the conclusions based on such a procedure is made clear by the following hypothetical illustration: Let $100 be distributed among ten persons as follows: $1, $3, $5, $7, $9, $11, $13, $15, $17, $19. Then suppose each individual's holding is doubled, thus: $2, $6, $10, $14, $18, $22, $26, $30, $34, $38. Relatively to each other they are all in the same position as before, but by the erroneous method of comparison referred to, there appears to have been a concentration because the number in the highest class has increased most rapidly:

TABLE I

Class	Number	
Dollars	First Case	Second Case
0 and less than 5	2	1
5 and less than 10	3	1
10 and less than 15	2	2
15 and over	3	6

A satisfactory method of comparing the distribution of wealth at different epochs must take account of the *changing significance of fixed classifications* when there has been a change in the *per capita* wealth. This can be done by observing what proportion of the wealth is owned by certain sections of the population, such as the poorest third, the middle third, or the upper third.

If a larger proportion of the total wealth falls into the hands of the upper third, we may say there is evidence of a growing concentration of wealth. It is clear that no definite movement is necessarily discernible even when changes are taking place, for these changes may tend toward concentration in one part of society and toward diffusion in another.

Statistics of Distribution. — There are many investigations showing the earnings of particular classes of workers, but in the United States there is no reliable statement of the division of the national wealth or income among all classes of society. We cannot use the property tax assessments for this purpose because of their inaccuracy, and because of the fact that one individual may be taxed in various jurisdictions. The returns of the probate courts have been used as a basis for a statement of wealth distribution in the United States on the assumption that the distribution of wealth among persons who die in any year is an index of the distribution of wealth among those who are living. But the incompleteness of our probate returns makes this method also a hazardous one. The federal income tax returns will yield some valuable data regarding the number of higher incomes when the material is properly tabulated for that purpose.

Out of very inadequate material, however, Professor W. I. King has constructed the estimates shown in Table II. His figures indicate, further, that the richest 2 per cent of the families in the United States get about one fifth of the aggregate income, while the poorest two thirds of the families get about 39 per cent of the aggregate income. These estimates cannot be supposed to be entirely accurate, but the impression they give is undoubtedly correct in its general outlines.

The growth of the number of millionaires has been used as an evidence of growing wealth concentration, but it should be noted that a growth of population and wealth in a community would cause an increase in the number of millionaires, even if the relation between the various classes remained the same. Suppose that in 1850 there had been in the United States but fifty millionaires, that three hundred and fifty persons had from $750,000 to $1,000,000, and that six hundred persons had from

$500,000 to $750,000. If the population had remained the same and every one's wealth had been doubled, in 1900 there would have been one thousand millionaires, and if the population at the same time increased fourfold, with the relations among the new population the same as in the old, we should then have four thousand millionaires without any tendency toward concentration. Nevertheless, the increase of large fortunes has been so startling that in spite of these considerations one may perhaps regard them as an indication of a growing concentration of wealth. The lists of very rich men published in the United States from time to time are instructive on this point. In 1820 men with a personal property of $20,000 were included; in 1846 a total property of $50,000 was considered very large; in 1855 this was doubled; in 1892 a man had to be a millionaire to be considered very rich, and at present one may speak of even a billionaire.

TABLE II

DISTRIBUTION OF INCOMES IN THE UNITED STATES: 1910[1]

INCOMES IN DOLLARS	PER CENT OF FAMILIES RECEIVING LESS THAN STATED INCOMES	INCOMES IN DOLLARS	PER CENT OF FAMILIES RECEIVING LESS THAN STATED INCOMES
200	.07	1500	90.31
300	1.04	1800	93.67
400	7.17	2000	94.86
500	16.70	2400	96.18
700	38.92	3000	97.42
1000	69.43	3600	98.10
1200	81.69	4000	98.39

More satisfactory statements can be made for those countries which collect an income tax. The following figures for 1892 and 1902 are from a table prepared by Professor Wagner, in a study of the income-tax returns of Prussia, and the corresponding figures for 1913 have been added:

[1] From W. I. King, *Wealth and Income of the People of the United States*, p. 228.

TABLE III

INCOMES IN PRUSSIA: 1892, 1902, AND 1913[1]

INCOMES IN DOLLARS	PER CENT OF PERSONS (Heads of Families or Self-Supporting Individuals)			PER CENT OF INCOME (That below $214 is estimated)		
	1892	1902	1913	1892	1902	1913
Below 214 ...	78.18	70.66	52.49	41.21	32.97	18.28
214–714 ...	18.98	25.83	42.12	30.01	34.92	46.25
714–2261 ..	2.33	2.88	4.53	12.83	13.73	15.84
2261–7259 .	0.41	0.51	.68	7.37	7.84	8.12
7259–23800.	0.08	0.10	.14	4.65	5.13	5.62
Over 23800.	0.01	0.02	.04	3.93	5.40	5.89
Absolute amounts (Total)	Number 11,162,000	Number 12,813,000	Number 15,404,855	Dollars 2,309,076,000	Dollars 3,039,498,000	Dollars 4,736,000,000

The great mass of the people even in 1913 were too poor to pay any income tax at all, the minimum income taxed being $214. About 5 per cent of the population at the top received about one third the total income in 1913, but in connection with such a statement it should be said that even if incomes should be equally distributed, the average income per family, or single adults, would be very small. In 1902 the average money income was $237 and in 1913 it had risen to $307. This absolute increase in money incomes among the poorest class of the people is shown in the table in the much smaller proportion of the population found in the class with incomes below $214 in 1913 than in 1902. This increase in money income does not necessarily mean greater well-being or greater equality, but the table as a whole shows no marked tendency toward a concentration of incomes in the hands of the upper classes.

When we turn from the question of relative well-being to that of the actual condition of each class taken by itself, we find two facts standing out prominently: (1) the fruits of economic

[1] From *Zeitschrift des Preussichen Statistischen Bureaus*, 1904, p. 231, and *Statistisches Jahrbuch für den Preussischen Staat*, 1913.

progress have not been confined to a small class, but have been shared by the masses, and (2) a surprisingly large section of the population is still in poverty.

With respect to the first fact, we may say that in material comforts the people of this generation are better off than they have ever been before. The work of settlement in which so many of our forefathers engaged was laborious and exhausting. Food was often scarce, disease was rife in many settlements, and the women and children in particular suffered greatly. After the wilderness was cleared, there ensued a period of "rude plenty." Food was abundant, but it was coarse in quality and restricted in variety, whilst everything that had to be brought from a distance was very expensive. Education was difficult to secure, books scarce, and the lives of most people were, in the main, monotonous and uneventful.

The course of wages from the middle of the eighteenth century to the year 1905, and the movement of prices from 1860 to the latter date, are given in Table IV following. The figures are not altogether comparable, nor so trustworthy as could be wished, but the general impression which they give is correct for the period covered. Speaking generally, money wages have steadily risen, and the hours of labor have declined, with minor interruptions, since the colonial period, while prices have fluctuated irregularly. This table cannot be given in the same form for later years, but a recent study covering the period from 1890 to 1912 shows that the purchasing power of hourly wages, although increasing from 1890 to 1905, fell rapidly after that date owing to the rapid increase in prices, so that an hour's wages purchased less in 1912 than in any previous year of the period. As the number of hours per week decreased steadily from 1890 to 1912, the purchasing power of a week's wages was only about 85 per cent of what it had been in 1890. Purchasing power here is measured by retail prices of food.[1]

[1] I. M. Rubinow, "The Recent Trend of Real Wages," *American Economic Review*, Vol. iv, p. 811. *Cf.* the table on p. 341, above.

TABLE IV

Wages, Prices, and Hours of Labor in 1860 taken as 100						Wages, Prices, and Hours of Labor in 1890 taken as 100			
Day Laborers in Massachusetts[1]		Employees in Manufacturing Industries — Eastern States				General Industry, excluding Agriculture, Mining, and Transportation			
Period	Relative Wages	Year	Relative			Year	Relative		
			Wages[2]	Cost of Living[2]	Hours of Labor[3]		Wages[4]	Prices[5]	Hours of Labor[6]
1752–60	.29	1860	100	100	100	1881	95.3	114.5	103
1761–70	.325	1861	100	111	99.1	1882	96.9	117.5	103
1771–80	.376	1862	100	123	98.2	1883	97.7	114.8	103
1781–90	.428	1863	109	137	98.2	1884	98.5	107.7	103
1791–00	.623	1864	120	163	98.2	1885	97.8	100.8	103
1801–10	.817	1865	141	175	97.3	1886	97.8	99.6	102
1811–20	.910	1866	153	172	98.2	1887	98.6	100.3	100
1821–30	.796	1867	172	164	98.2	1888	99.2	102.1	100
1831–40	.872	1868	167	165	96.4	1889	99.6	102.1	100
1841–50	.852	1869	174	163	96.4	1890	100.0	100.0	100
1851–60	.975	1870	175	157	95.5	1891	99.7	101.4	99.8
		1871	178	148	95.5	1892	100.3	99.5	99.8
		1872	174	147	95.5	1893	100.2	102.0	99.6
		1873	175	149	95.5	1894	96.7	97.4	99.1
		1874	170	145	95.5	1895	97.4	95.5	99.4
		1875	161	141	93.6	1896	98.5	93.3	99.1
		1876	156	134	93.6	1897	98.2	94.0	98.9
		1877	146	131	93.6	1898	99.0	96.4	99.0
		1878	142	126	93.6	1899	100.2	97.2	98.5
		1879	140	123	93.6	1900	103.1	98.7	98.0
		1880	137	125	93.6	1901	104.8	102.7	97.4
						1902	108.2	108.3	96.6
						1903	111.2	107.7	95.9
						1904	111.1	109.1	95.2
						1905	112.8	109.8	95.2

[1] Data from Report of Massachusetts Bureau of Statistics of Labor for 1885, p. 455.

[2] Data from Mitchell, *Gold, Prices, and Wages under the Greenback Standard*, pp. 242–244. The cost of living here is based upon retail prices and covers rent as well as food, etc.

Regarding the second fact, we may say that certain English investigations show that more than one fourth of the population of the cities of London and York are below the poverty line. To be sure, it is not easy to determine definitely how poor a person must be in order to be " in poverty," but the statement just made is based upon standards that are undeniably conservative. But a number of those actually in poverty have enough income to purchase the minimum physical requirements if they knew how to spend their money wisely. In the city of York 9.91 per cent of the population had insufficient earnings for minimum requirements estimated at $5.25 per week for a family of five. This minimum is very low, and it is easily within the mark to say that at least a fifth of the population of York did not have in 1899 a sufficient income for a decent existence. In the United States the proportion of the urban population below the poverty line is probably somewhat less, but reliable statistics cannot be quoted.

An American writer has estimated that ten million persons in the United States are in poverty, not all in distress, but " much of the time underfed, poorly clothed, and improperly housed." The estimate is based on statistics of unemployment, returns of boards of charity, court records of evictions, and pauper burials. Whatever the actual figures may be, they would doubtless be startling in comparison with statistics of our industrial progress.

Causes of Poverty and Riches. — The explanations of poverty and riches may be divided into two classes: (1) those that emphasize individual responsibility, and (2) those that emphasize

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[3] Based upon statistics covering 21 industries given in the Aldrich Report on Wholesale Prices, Wages, and Transportation.

[4] Statistics for 1881–1889 cover 25 city occupations, and are based upon data given in *Bulletin of the Bureau of Labor*, No. 18, p. 669. Statistics for 1890–1905 cover 349 occupations, and are based upon data given in *Bulletin of the Bureau of Labor*, No. 65, p. 20.

[5] Wholesale prices from 1881 to 1889, based upon data given in the Aldrich Report on Wholesale Wages, Prices, and Transportation, Part i, p. 99. Retail prices of food from 1890 to 1905, from the Bulletin last cited.

[6] From the Aldrich Report and *Bulletin* cited above. After 1890, statistics are based on hours of labor per week.

social responsibility. According to the first, a comfortable fortune is the reward of efficiency, and poverty the penalty of inefficiency. To find fault with existing wealth distribution, it is alleged, is to find fault with nature for making individual differences in ability so enormous. That there are idle and worthless persons among the rich is not to be denied, but they, it is said, are to be regarded as the exceptions. As a class, according to this view, the rich add more to the wealth of society than they consume, and they do not in reality deduct anything from the income of the lower classes.

Those who emphasize the second explanation, on the other hand, point to the existence of all sorts of special privileges which enable the few to levy toll on the production of the nation. They assert that the fortunes of most millionaires originated under the shelter of some monopolistic enterprise. As to the poor, they call attention to the fact that inefficiency may be the result of poverty as well as the cause of it. Society must, therefore, take active measures to better the environment of the poor. They must be taught to live wisely, and their children must be given a fair chance in life. Children who do not get enough to eat when young cannot be expected to take care of themselves when they are men and women.

"The prime importance of monopoly privileges in the distribution of wealth is shown by the results of the investigation of the New York *Tribune* (1892) in its efforts to ascertain the sources of the fortunes of the millionaires of the United States. That investigation was undertaken to show that the system of protection has not been the main cause for monopolies and great fortunes. The investigation amply demonstrated this proposition. Of the 4047 millionaires reported, only 1125, or 28 per cent, obtained their fortunes in protected industries. The following partly estimated summaries are based on the *Tribune* report. They show that about 78 per cent of the fortunes were derived from permanent monopoly privileges and only 21.4 per cent from competitive industries unaided by natural and artificial monopolies. Yet there can be no question that if these 21.4 per cent were fully analyzed, it would appear that they were not due solely to personal abilities unaided by these permanent monopoly privileges. They were mostly obtained from manufactures, and five sixths of the manufactures of the country are based on patents. Besides, fortunate investments in real estate, stocks, etc., have often contributed to fortunes where they do not appear

prominently. Furthermore, if the size of the fortunes is taken into account, it will be found that perhaps 95 per cent of the total values represented by these millionaire fortunes is due to those investments classed as land values and natural monopolies and to competitive industries aided by such monopolies." [1]

Those who take this second view do not deny that individual differences in ability exist and are a cause for a difference in fortune. But they think that conditions are such that differences in reward are quite out of proportion to the difference in ability. A little shrewdness may accumulate a fortune just as the touch of a child's hand may start a bowlder down the mountain side.

The controversy as to the ultimate responsibility for poverty cannot be settled by an appeal to the results of the investigations that have been made as to the immediate causes of poverty. The investigation in the city of York, before referred to, gives the following as the immediate causes of primary poverty, that is, of incomes insufficient to provide the minimum requirements for physical efficiency even if wisely spent:

TABLE V

IMMEDIATE CAUSES OF "PRIMARY" POVERTY [2]

	PER CENT OF POPULATION IN POVERTY
Death of chief wage earner	15.63
Illness or old age of chief wage earner	5.11
Chief wage earner out of work	2.31
Irregularity of work	2.83
Size of family, *i.e.* more than four children	22.16
In regular work but at low wages	51.96
	100.00

Is Greater Diffusion Possible? — Most people agree that a greater equality of possessions would be desirable if it could be brought about without any confiscation of the real earnings of the more efficient members of society. The idea of a leisure

[1] J. R. Commons, *The Distribution of Wealth*, p. 252.
[2] B. S. Rowntree, *Poverty*, p. 120.

class whose mission it is to further culture without substantial contributions to the production of what it consumes, does not find much favor in this democratic age. The disadvantages of wide extremes in wealth have been so often pointed out by social philosophers that they need not be emphasized here. But those who believe that the competitive system roughly apportions rewards according to individual production will say that nothing can be done directly to diffuse wealth. That each individual should bear the consequences of his own conduct, they think, is necessary as a discipline for the race. "Give the children of the shiftless, by thoughtless charity or various systems of poor relief, the right to eat the substance of the efficient and the prudent, and you will soon lose both the capital and the morality under which that capital has been created," [1] says one able writer.

Those, on the other hand, who think that something can and should be done, question the possibility of discovering the real contributions of individual workers under modern complex industrial conditions with any degree of exactness, and think there is little danger of discouraging industry and thrift. If the highest incomes were $100,000 per year, men would struggle just as hard as they do now to get into the highest class.

If we take the view that something can be done to lessen the extreme inequality in wealth distribution that exists at the present time, it is necessary to formulate some program of social reform. In framing such a program it must be remembered, on the one hand, that the right of private property is not an absolute right. No one has a vested interest in that institution, and we are at liberty to make such modification in the institution as will contribute to the social welfare. For the present the measures here advocated are not in the slightest danger of being carried so far as to discourage that wealth-getting ambition which is considered by many to be essential to progress. On the other hand, there is danger of injuring by wrong methods the very persons whom it is desirable to elevate. Indiscriminate charity may convert poverty to pauperism.

[1] A. T. Hadley, *Economics*, p. 49.

"This distinction between the poor and the paupers may be seen everywhere. There are, in all large cities in America and abroad, streets and courts and alleys where a class of people live who have lost all self-respect and ambition, and who rarely if ever work, who are aimless and drifting, who like drink and who have no thought for their children, and who live aimless and contentedly on rubbish and alms. . . . In our American cities, Negroes, Whites, Chinese, Mexicans, Half-breeds, Americans, Irish, and others are indiscriminately housed together in the same tenements and often in the same rooms. The blind, the crippled, the consumptive, the aged, — the ragged ends of life; the babies, the children, the half-starved, underclad beginnings in life, all huddled together, waiting, drifting. This is pauperism. There is no mental agony here; they do not work sore; there is no dread; they live miserably, but they do not care.

"In these same cities, and indeed everywhere, there are great districts of people who are up at dawn, who wash and dress, and eat breakfast, kiss wives and children, and hurry away to work or to seek work. The world rests upon their shoulders; it moves by their muscle; everything would stop if for any reason they should decide not to go into the fields and factories and mines. But the world is so organized that they gain enough to live upon only when they work; should they cease, they are in destitution and hunger. The more fortunate of the laborers are but a few weeks from actual distress when the machines are stopped. Upon the unskilled masses want is constantly pressing. As soon as employment ceases, suffering stares them in the face. They are the actual producers of wealth, but they have no home nor any bit of soil which they can call their own. They are the millions who possess no tools and can work only by permission of another. In the main they live miserably, they know not why. They work sore, and yet gain nothing. They know the meaning of hunger and the fear of want. They love their wives and children. They try to retain their self-respect. They have some ambition. They give to neighbors in need, yet they are themselves the actual children of poverty." [1]

We shall not discuss here the methods of alleviating the suffering that comes from poverty. The best methods of charitable relief are necessary as palliatives, but they cannot cure the evils of poverty. Two classes of reform measures should be distinguished: (1) those that aim to alter the methods of wealth acquisition in the future, and (2) those that aim to diffuse the excessive accumulations of the past.

Modifying the Methods of Wealth Acquisition. — These measures again fall into two classes: (*a*) prevention of improper

[1] R. Hunter, *Poverty*, pp. 3–5.

methods of wealth accumulation; (*b*) eliminating or strengthening the inefficient members of society. Under the first of these falls the problem of reducing to lower terms such incomes as are individually unearned. There must be such control of monopolistic privileges as to keep them from being the means of exploiting the public. Fraud and favoritism must be eliminated so that income shall not be wholly out of proportion to service or needs.

The second class includes a large variety of methods. (1) It is possible to do something to prevent defective human beings from being born. There is a growing sentiment in favor of preventing the marriage of persons who are not fit for marriage. No individual would be deprived of any important right if a medical certificate of good health were made a condition precedent to the granting of a marriage license, although here education may prove the more effective remedy. (2) Education should be made compulsory, with the endeavor of making the rising generation not only efficient producers, but also wise spenders of what they receive. (3) It is possible to provide against the misfortunes of life by insurance of various kinds. If men will not voluntarily make provision for themselves and for those dependent upon them in cases of sickness, accident, old age, and premature death, they should be helped to do so indirectly by some comprehensive system of workingmen's insurance and old age pensions. (4) The solution of the problem of unemployment depends in part upon indirect measures, such as monetary and banking reform, which steady the progress of industry, although more efficient labor exchanges and unemployment insurance are direct measures which are of some help. If business men and political leaders ever become as much interested in the problems of unemployment as in tariff reform, we may expect that productive use will be found for the unemployed so far as they are employable, and if this proves impracticable, we shall recognize that if society cannot offer a willing and able man an opportunity to work, it must give him a vacation with pay. (5) Opportunities for saving should be multiplied. The establishment of our postal-savings system

is a small step in this direction. (6) The health and vigor of the people should be improved by more efficient use of "preventive medicine" and public hygiene in all its various phases, and by improvement in the conditions of work.

The Diffusion of Wealth. — To some extent large fortunes disappear without governmental interference, but it takes comparatively slight ability to maintain an inherited estate. It does not seem practicable or desirable to limit directly the total amount of wealth which a man may own, but there is no reason why the government should refrain from consciously encouraging the diffusion of wealth. The regulation and taxation of inheritances seems to be the proper remedy in this connection, even if its action is somewhat slow.

QUESTIONS AND EXERCISES

1. Can anything be said in favor of a leisure class?
2. Would Mr. Carnegie's plan of levying an inheritance tax of 50 per cent destroy the incentive to work?
3. Explain the various systems of poor relief.
4. Describe the work of some public employment office.
5. Describe the growth of postal savings.
6. What were the causes of the development of the fortune of John Jacob Astor?
7. Discuss the following statement: "We have, then, little reason for expecting that the prevailing insecurity in the lot of the modern workman will ever be removed by the development of individual thrift." — A. S. Johnson, *Political Science Quarterly*, Vol. xxii, p. 244.

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PART IV

SELECTED ECONOMIC PROBLEMS

CHAPTER XXVII

TRANSPORTATION ECONOMICS

Transportation Economics Defined. — Transportation may be studied from various points of view. It presents its peculiar problems to the engineer, to the lawyer, to the financier, to the accountant, to the operating official, and finally to the economist. The economist studies the relations of transportation to other industries and to the public welfare. Leaving to the engineer the building of bridges, to the accountant the recording of the condition of the business, and to the general manager the securing of efficient operation, we turn our attention primarily to the principles that govern the determination of rates and fares, although there are many other problems to be considered in transportation economics, some of them peculiar to this field and some but special illustrations of principles underlying all industry. We make use of the technical knowledge of the engineer and of the other specialists that have been mentioned, and yet our point of view is distinct.

Scope of the Term Transportation. — A complete treatment of the subject of this chapter would involve a consideration of steam railways, interurban and city railways, the common roads, water transportation, as well as the post office, the telegraph and the telephone. Aërial transportation may bring new economic problems in the future. But it will be necessary in this chapter to confine the discussion to some of the leading principles in the economics of railroad transportation. As

explained in Chapter VI, the early turnpike era was followed by one of canal building, and this in turn by the railroad era. We are now realizing that we must enter upon a new era of road building and of the improvement of waterways. Canal and river improvement, however, should be urged, not on the general ground that water transportation is cheap, but only in specific instances where it can be shown to be as advantageous as rail transportation when all of the elements of expense are taken into consideration. It is a matter of debate, for example, whether the recent construction of the New York barge canal was economically justified. The improvement of our common roads is now being vigorously forwarded by state and local activity. In 1916 the federal government made an appropriation to aid the states in carrying on this work.

Nature of the Railway Industry. — Hardly anything can be produced without the participation of some transport agency. Modern industrial civilization would be impossible without an efficient system of commercial intercourse. The dependence is mutual, for present methods of transportation clearly would be uneconomical without a large traffic. The influence of cheap transportation is especially important in the fact that it promotes an extensive division of labor by widening the market. It permits each region to devote itself to that line of production for which it is best adapted.

The number of persons employed by railways in the United States in 1910 was about 1.7 millions, which was 4.45 per cent of the number of gainful workers reported by the census of that year. This percentage probably understates the relative importance of transportation as compared with other economic activities, because the capital per employee is larger in the railway industry than in other lines of work. An attempt has sometimes been made to minimize the importance of the question of railroad rates by comparing the transportation charge on such an article as a pair of shoes with the cost of the shoes and showing that it is too small appreciably to affect the retail price. This overlooks the fact that freight charges enter into the cost of the materials and of the machinery required to produce the shoes.

The freight charge constitutes a large percentage of the cost of such an article as coal. But, on the other hand, the importance of changes in freight rates is sometimes overemphasized by comparing the total annual freight revenue per family with the estimated income of the average family. Thus in the year ending June 30, 1910, the freight revenue of railways in the United States was $1,925,553,036, and the number of families as reported by the census of 1910 was 20,255,555, making an average of ninety-five dollars per family. It should be obvious that this figure cannot be compared with the amount which the average family spends for food, clothing, and other items of final consumption. If the comparison is made at all, it must be with the total annual *production* of the nation per family, for freight charges enter into the cost of such items as the factories, war-ships, and railway bridges constructed each year as well as of the articles produced for final consumption.

Railways differ from manufacturing industries in that they produce place utility and not form utility, and in the further fact that it is customary for manufacturers to own the materials which they change in form while railways as a rule do not own the materials which they transport. In other words, railways sell services simply, while manufacturers sell articles in which they have embodied certain services. The freight charges paid by the shipper may be compared with the toll which the farmer used to pay for having his corn ground at the mill. The fact that railways do not buy and sell the commodities to which they add utility as manufacturers do, makes the amount of their yearly income and outgo much smaller in comparison with the amount of capital employed than is the case with manufacturers. Roughly speaking, it takes railways five years to " turn over " their capital, the total operating revenues of the railways in the United States being about three billions of dollars a year, while their capitalization is about fifteen billions (excluding intercorporate duplications). For the year 1909, the Bureau of the Census reports manufacturing establishments as having a capital of 18.4 billions of dollars and an annual value of products of

20.7 billions. The value of products less cost of materials purchased, that is, the value added by the manufacturing process, was 8.5 billions. While no accurate comparisons are possible from these data, they warrant the conclusion that capital is relatively much more important as a factor of production in the railway industry than in manufacturing enterprises taken as a whole. The fact that railway services are rendered in connection with a large fixed capital explains much in our railway history, especially with respect to matters relating to competition, monopoly, and rate making.

Railway Competition. — The early roads were short, independent lines, largely for local traffic or to serve as feeders to canals. The first movement toward the efficiency of the present system was the welding together of separate links into through lines. The New York Central, for example, was formed in 1853 out of ten or eleven previously independent lines between Albany and Buffalo. The development of parallel through lines introduced an era of sharp competition. In the seventies the lines connecting Chicago and the Atlantic seaboard engaged in a series of rate wars. The experience of this decade showed clearly the temporary and unstable character of competition among parallel lines. The rule seemed to be that a railway war must be followed by a rate agreement of some sort, so that instead of the maintenance of a supposedly fair level of rates by the steady pressure of competition, we find there was an alternation of high and low rates. The inevitable annihilation of direct competition in rates between railways is clearly portrayed in a congressional report in 1874, where the following prediction was made: "But when the natural tendencies of corporate power have wrought out their inevitable conclusions, the magnitude of our combinations will probably be in proportion to the extent of the field in which they operate." But so strongly was it felt at that time that competition is the life of trade, that the committee which made this report recommended that the government build a line of its own, merely to maintain competition with the private roads, for it was thought that the government could resist the temptation to enter into a combination.

The history of Belgium affords an instructive illustration of the effect of a mixed system of public and private ownership. Belgium began in 1837 with a carefully planned system of public railways. Ten years later it was decided to grant charters to private companies. A large number of private roads was organized, some with the purpose of competing with the state system. It was thought that competition between the state and private roads would be beneficial. The Massachusetts Railroad Commission, in its report of 1871, recommended a trial of this plan in Massachusetts. But in Belgium the private lines were soon merged into four systems, which competed so vigorously with the state roads that the government adopted the policy of purchasing them.

Pooling and Consolidation.— As a result of the intense struggle for business among the roads, there was a widespread resort to the practice of *pooling*, that is, a division of the earnings or tonnage of the aggregate business. This form of combination, however, was at least nominally abandoned after it was declared illegal by the Interstate Commerce Act of 1887, but organizations for the purpose of making rates continued to exist. In 1897 these were also declared illegal by the Supreme Court of the United States on the ground that they were in violation of the Anti-trust Act of 1890.[1] The decision, however, did not clearly prohibit the enlargement of the various systems by the purchase and lease of other lines, or by securing indirect control by the purchase of the majority of their stock. But in 1904 the Supreme Court again applied the Anti-trust Act of 1890 in a case against the Northern Securities Company, a corporation formed, not for the purpose of directly engaging in the railway business, but for the purpose of holding the capital stock of the Great Northern, Northern Pacific, and Burlington systems, two of which were competing systems. In 1912 it was decided that for the Union Pacific Railroad Company to hold indirectly 46 per cent of the stock of the Southern Pacific Company was illegal, although only a small percentage of the total traffic of these roads could be regarded as competitive. The Northern Securities decision did not prevent the systems involved from continuing to be controlled by the same financial interests, but the Union Pacific case has apparently resulted in severing the finan-

[1] See p. 237, above.

cial control of the Union Pacific from that of the Southern Pacific.

The present organization of any one of our large systems, like a geological record, reveals the nature of the changes that have been going on. The consolidated company controls a number of large lines, perhaps by stock ownership, and each one of these is made up of a number of subsidiary roads united as a result of purchase, partial stock ownership, or lease.

Thus the Baltimore and Ohio in 1912 operated 4455 miles of line, of which it owned 545 miles, while 3897 miles were controlled through partial or complete stock ownership, the remainder being operated under lease or trackage rights. It also controlled the Cincinnati, Hamilton, and Dayton, an independent operating company. There are numerous illustrations of the control of one large operating company by one or more other operating companies. Thus the Northern Pacific and Great Northern Companies jointly control the Burlington. Again, several operating companies may be controlled by a holding company which does not itself operate any mileage. This is the case with the Louisville and Nashville and the Atlantic Coast Line Railroads, both of which are subsidiary to the Atlantic Coast Line Company. Again, two or more railroads, apparently quite independent of each other in the matter of stock ownership, may nevertheless be dominated by the same financial interests. Thus the Morgan interests control the Erie and the Southern as well as other railroads. It is safe to say that ten groups of capitalists control over three fourths of the railway mileage of the United States.

In spite of the progress of consolidation, competition has not entirely disappeared. Even where there is no active cutting of rates by parallel lines, there may be rivalry in service; but this form of competition has also proven to be unstable and unsatisfactory, as is seen in problems arising in connection with terminal freight services. Again, alternative routes may lead to competition among railways that are not parallel. Thus the roads serving the north Atlantic ports compete in the carriage of grain with those extending to Galveston and New

Orleans. The influence of water competition on railway rates has been recognized by the Interstate Commerce Commission in the adjustment of transcontinental rates and in the numerous exceptions it permits in the southern states to the rule that the charge for the shorter haul shall not exceed that for the longer. The activities of the traffic departments of railways indicates the existence of competition for business at many points. The Panama Canal will be a factor in railway competition.

Much has recently been said about the influence of *market competition* as a force affecting rates, even when the roads have been consolidated. To illustrate, the farmers and railways of North Dakota are joint producers of wheat, and they are both desirous that it shall be sold in competition with other wheat in the London market. It would be ruinous to the roads to make such high rates that the farmers could not afford to sell their grain. The railways cannot be prosperous if the farmers, merchants, and manufacturers along their lines are not prosperous. This partnership, however, has its limits, for a rate which would enable the producer to continue in business might still be unreasonably high.

The Movement of Rates. — The average revenue per ton mile of traffic in the United States fell from 1.001 cents in 1888 to .729 cents in 1900, rising to .780 in 1904, and falling again to .729 in 1913. Average ton-mile receipts, however, are not an accurate index of changes in rates, for this average is affected by the changes in the nature of the traffic as well as by changes in rates charged. The average ton-mile revenue is really a weighted index number with changing weights at different periods. If the proportion of low-grade freight increases, or if the length of haul increases, there will be a fall in ton-mile receipts without any change in rates. But if we also take into consideration rates on specific commodities, such as wheat, or stoves, between specific points, no doubt remains but that a large decrease in freight rates took place up to the year 1900. Since that time there have been many increases in published rates, but also many decreases have been made by order of various regulating bodies. It may be that the net effect of these changes

is fairly well represented by the ton-mile revenue, which has shown little change since 1900, although there has been some increase in the proportion of low-grade tonnage and in the average length of haul between 1900 and 1913, which would seem to indicate some increase in rates since 1900.

In 1910 the railway companies, both in the East and in the West, asked the Interstate Commerce Commission to sanction a general increase in freight rates. This it refused to do. In 1914, a renewed request for permission to increase rates on the part of Eastern carriers was at first denied but later granted. In 1915 an advance in rates on a long list of commodities was proposed by carriers in the Middle West. The commission permitted certain of the advances proposed and denied others. Railway representatives assert that rates should increase when prices generally are increasing, but they have failed to demonstrate any general increase in their own "cost of living" except in the higher rates of wages paid and the higher rates of interest recently prevailing. In the years following 1908, passenger rates were radically reduced in many states by two-cent fare laws. The average revenue per passenger per mile had shown little change prior to that time since the early nineties, when it was somewhat higher. Recently Eastern railways have also made general increases in passenger rates. A joint committee of Congress recommended in 1914 that the payments to railroads for carrying the mails be increased.

These general changes or proposed changes in rates and fares give renewed interest to the question of how a reasonable rate may be determined.[1]

[1] It is left as an exercise for the student to draw charts of the movement of revenues per ton per mile and per passenger per mile from the *Statistics of Railways* published by the Interstate Commerce Commission, and to compare at different dates the average length of haul and the proportions of various kinds of commodities carried. But it must be remembered that the average revenue per ton per mile is a single figure representing the result of applying an almost infinite variety of specific rates under varying traffic conditions. This is at once the advantage and defect of an average. To emphasize this point the average receipts per ton per mile are given in the following table for eight selected commodities by geographical districts. The average length of haul as given in this table is obtained by dividing the tons per mile by the number of tons carried, as reported by each railroad, in-

The Level of Rates. — If, owing to the monopolistic nature of the railway business, the determination of rates can no longer be left to the automatic working of competitive forces, they must be consciously determined according to fundamental principles. Competition was supposed to do justice by limiting the aggregate earnings of an establishment approximately to the expenses of

cluding both the tons originating on the line of the carrier and the tons received from connecting carriers. The average haul, therefore, is the average haul on one railroad and not the average haul for the railroads regarded as one system. For all commodities taken together in 1913 the average haul of a ton on one railroad was 147 miles as against 260 miles for all the railroads regarded as a system. This last figure is obtained by dividing the ton-miles by the number of tons reported as originating on carriers' lines, excluding the tonnage received from connecting carriers. The same correction cannot be made for the individual commodities. The following table, it may also be noted, does not cover all of the mileage of the country, as many railroads do not compile traffic statistics in this form.

AVERAGE RECEIPTS PER TON PER MILE AND AVERAGE LENGTH OF HAUL FOR SELECTED COMMODITIES IN CARLOAD LOTS FOR YEAR ENDING JUNE 30, 1913, COVERING 151,941 MILES OF ROAD

(From *Statistics of Railways in the United States*, 1913, p. 44.)

DISTRICT AND ITEM COVERED	GRAIN	HAY	COTTON	LIVE STOCK	DRESSED MEATS	ANTHRACITE COAL	BITUMINOUS COAL	LUMBER
Eastern District								
Receipts per ton-mile — cents	0.375	0.851	0.538	0.842	0.893	0.571	0.417	0.623
Length of haul — miles	262	158	252	228	327	170	126	148
Southern District								
Receipts per ton-mile — cents	0.620	0.938	1.927	1.723	1.043	0.555	0.403	0.734
Length of haul — miles	250	193	179	138	255	119	180	161
Western District								
Receipts per ton-mile — cents	0.740	1.155	1.792	1.397	1.106	0.630	0.676	0.713
Length of haul — miles	236	162	230	209	327	173	117	200
Total — All Districts								
Receipts per ton-mile — cents	0.581	1.005	1.693	1.258	0.965	0.578	0.447	0.701
Length of haul — miles	248	166	214	209	323	170	135	176

doing the business, and it seems most natural that we should apply the same standard in our railway rate making. There can be no doubt but that expense is a safe guide so far as it can be accurately determined. It needs but a slight analysis of railway expenditure, however, to reveal the difficulty of using expense as a criterion of a fair rate. In 1913 the railways reported to the Interstate Commerce Commission operating revenues and other income amounting to 3297 millions of dollars, and in this same year the interest on funded debt and dividends amounted to 666 millions, or 20.2 per cent of the revenues and other income. This represents the amount accruing to the stock and bondholders as joint owners of the business, not counting the increase in surplus. Is this a proper payment to such owners? That some compensation of this sort is necessary under the régime of private capitalism is clear, for if none were made, new roads would not be built nor would old ones be maintained. A common answer is that the owners should be allowed a fair return upon their investment, but it is difficult to say what is a fair return and what is the actual investment. The rate of interest to be allowed must be determined from a study of the investment market and from a consideration of what is necessary to provide a surplus for the lean years and for unproductive improvements.

A more perplexing question is to decide upon a fair valuation upon which the return is to be calculated. Neither the amount of stocks and bonds nor the ledger value of the property is a safe guide. In some cases the actual investment may be traced historically where the records have not been destroyed, but this raises a series of difficulties. Was the investment wisely made, or does it contain a large profit paid to some construction company? Should investments made out of income or surplus be distinguished from the original investment or from proceeds of the sale of stock and bonds? The difficulty of ascertaining the full history of the investment has led to estimates of the cost of the production or reproduction of an enterprise by means of an engineering survey of the road and equipment. The Interstate Commerce Commission, through its Division of Valuation, has been engaged on the gigantic task of making

a valuation of the entire railway system of the United States. Expensive as this undertaking is, it seems to be the only hope of reaching an equitable determination of what is to be regarded as a fair valuation upon which to base rates. Should the people of the United States ever reach the conclusion that it is wise for them to own the railways, a valuation of this kind, kept up to date by appropriate accounting, will be of the greatest benefit. But the "physical" or engineering valuation itself will not answer the question of what is a fair value. Shall the "cost new" or the "depreciated value" be taken? To what extent shall an intangible or "going" value be recognized?

No answer of universal application can be given to these questions, but it may safely be said that when a depreciation fund has been accrued through annual charges to operating expenses, the amount of such depreciation must be deducted from the cost new. It is sometimes said that if we deduct depreciation we must also add appreciation, but this is taken into account in the method by which valuations are usually made, that is, where real estate is valued according to the selling price of neighboring lands. It is extremely doubtful whether any going or intangible value should be recognized. To do this might amount to rewarding a railroad for becoming a monopoly. The case is somewhat different from that of a manufacturing establishment where its "good-will" may frequently be developed by superior skill in the face of competition.

Relative Rates. — When the general level of rates has been determined we are confronted by the question of what should be charged for each particular shipment, and here we find the application of the principle of expense of still greater difficulty and uncertainty. In attempting to say what it costs to carry a ton of coal a mile, we find that a large part of the expenditure is incurred, not for one specific kind of commodity, but jointly for many kinds. The roadbed, ties, and rails are maintained, not for coal cars alone, but for passenger trains as well. Even with the most careful bookkeeping it is possible to trace a direct causal connection between only a part of the expenses and specific portions of the traffic. It is possible to say that a certain traffic

requires a certain amount of extra labor and fuel, and causes a certain amount of wear and tear, and clearly such traffic should normally pay enough to meet these expenses at least, if we wish to prevent waste. But what shall be done with such joint expenditures as fall under the head of maintenance of way? Shall they be charged to the freight or to the passenger services? The prevailing opinion has been that the cost of carrying a specific shipment cannot be determined with sufficient accuracy for any useful purpose because the element of "joint expense" is said to be a prominent characteristic of the production of railway services. In 1894 the National Association of Railroad Commissioners and the Interstate Commerce Commission indorsed the view that railroads should not be required to separate the operating expenses of their freight and passenger services. Since that time there has been a great development among manufacturing enterprises of what is known as cost accounting, which is concerned with the apportionment of the total expenses of a factory among its several products. This has been found useful both in matters connected with the fixing of prices and in determining the efficiency of the various departments of an enterprise. Statistics of this kind were also developed by some railway managements, but little use was made of them in determining rates. In 1907 the railroad commission of Wisconsin gave an impetus to railway cost accounting by its opinion in the case of *Buel* vs. *C. M. and St. P. Railway*, where the reasonableness of a passenger rate of three cents a mile had been questioned. A complete apportionment was made of the expenditures of this railroad between its freight and passenger services. In 1914 the Interstate Commerce Commission reconsidered the whole matter, and after a public hearing decided that in the future railways must report their operating expenses separately for freight and passenger services according to bases to be prescribed by the commission.[1]

Is there a sound theoretical basis for this newer development? This is a controverted point in economic theory and a full discussion cannot be given here. What has been said in Chapter

[1] *In the Matter of the Separation of Operating Expenses* (30 I. C. C. Reports, 676).

XI regarding constant and variable expenses and joint expenses of production should be reviewed in this connection. Within certain limits an increase in the volume of railway traffic results in a lower average outgo per unit of product because certain items, such as maintenance of way and the interest on the investment in the roadway, do not grow as rapidly as the traffic, not to mention other economies. As railways can classify their traffic by commodities and points of origin and destination, it will pay to make low rates on traffic which would not otherwise be secured. But it is superficial to stop with the analysis at this point. As traffic increases the tracks and bridges are strengthened and additional tracks are added. *In the long run* the amount of the investment is markedly affected by the volume of traffic; that is, in the long run there is a causal connection between growth in volume of traffic and growth in maintenance and interest charges, and this is the theoretical basis for attempting to distribute transportation and equipment expenses and at least a part of the maintenance and interest charges to specific services. As a matter of fact, over 70 per cent of all of the operating expenses can be directly assigned to freight service or to passenger service without arbitrary apportionments, when the accounting is arranged for that purpose, and a considerable part of the investment can also be directly assigned to one service or to the other. The kind of expenses which can be distinguished as between freight trains and passenger trains can also logically be distinguished as between different classes of freight trains, so that the cost of hauling a trainload, a carload, or even a ton of freight a mile can be approximated. If any class of freight traffic or passenger traffic cannot bear the operating expenses and interest charges attributable to that class of traffic, it is not profitable traffic.

It is worth noting that the variety of railway *services* is not nearly so great as might be imagined from the multiplicity of rates in existence. Freight transportation consists in moving a mass of material in freight cars, and from the cost standpoint it makes little difference whether we call the material sand, cement, or iron ore. The fact that commodities vary in bulk

as compared with their weight is not an insuperable difficulty in comparing their costs of transportation. Forty tons of coal can be loaded in one car while forty tons of bird cages might require forty cars, but the train resistance caused by a car and contents in each case can be measured approximately.

While greater emphasis may in the future be laid on the cost principle, rates will doubtless continue to be based to a very large degree on the principle of " charging what the traffic will bear." Whether because of past commercial developments or for reasons of public policy, some traffic will be carried at rates less than those indicated by cost considerations, and this means that other traffic will have to bear rates higher than those indicated by considerations of cost. Some of the expenses of every railroad, varying in some degree with its stage of development, may even in the long run be regarded as independent of the traffic, and such expenses should be distributed over such traffic as can best bear them. In the construction of freight classifications, the value of a commodity itself is given consideration as a measure of what the traffic can bear or of the " value of the service," but it is clear that this is not an exact measure.

Distance. — A most perplexing factor in rate making is that of distance. In actual practice, distance has been to a very large degree ignored. For example, in *group rates*, the same charge is made to a common market from any point within a certain area, irrespective of the length of the haul. In the *basing-point system*, the rates to small towns in a certain region will not vary according to the distance from the point of shipment, but are found by adding together the rate to a railway center, called a basing point, and the local rate from this basing point to the small town, even though the town be nearer than the basing point to the original point of shipment. Again, goods brought from a foreign country to a point in the interior may be given a rate lower than the domestic rate from the point of entry to the same point in the interior. Again, goods intended for export sent from Chicago to New York may pay less than those intended for use in New York. Goods are sent to San Francisco from New York

for less than the rate from many points west of the Mississippi River to San Francisco.[1] These conditions have largely grown out of the competition of railways among themselves and with waterways.

The fact that distance is one element in the expense of carriage suggests that it should be taken account of in making rates, although there are many circumstances which necessitate a departure from the rule of a strict mileage rate. The fact that terminal charges, for example, are the same for a long as for a short haul justifies a decrease in the total charge per ton mile as distance grows. The great advantage of following a schedule of rates based on distance is that it affords some basis, although not an absolute guide, for settling sectional disputes concerning relative railway charges.

Government Ownership or Government Regulation? — With the decline of competition in the railway business, the alternative lies between private operation with government supervision on the one hand, and government ownership and operation on the other. There cannot be said to be any well-defined movement for government ownership in the United States. Socialists favor it as a step in the direction of their ideals, but conservative persons also have recognized that the difficulty of regulating railroads with sufficient stringency to prevent abuses and at the same time with sufficient freedom given to railway managements to develop their properties in the most efficient manner may make government ownership inevitable.

No convincing argument for either side of this question can be made by comparing the quality of railroad service and the rates charged in countries that have government ownership with the service and rates of railways privately owned and managed. There is little question that government ownership is feasible in this country and that good service might be expected. Greater pains might be taken to consider public convenience, and labor conditions might be improved for the lower classes of employees.

[1] See *City of Spokane* v. *Northern Pacific Railway Co.*, 21 I. C. C. 400 and 23 I. C. C. 454; *United States* v. *Union Pacific Railroad Co.*, 234 U. S. 495; *Commodity Rates to Pacific Coast Terminals and Intermediate Points*, 32 I. C. C. 611.

Personal discrimination might be expected to cease altogether. It has been suggested that rates could be reduced because, owing to the superior credit of the United States government, capital could be secured at a lower rate of interest. But it is difficult to tell to what extent the credit of the government might be adversely affected by the issue of sufficient bonds to purchase the railways of this country. There might be economies in the elimination of some of the expenses due to the efforts of railways to get traffic away from each other, to roundabout hauls, and to useless duplication of facilities.

The political consequences might be unfavorable. It would be unfortunate to have sectional disputes as to rates thrown into politics. Railroad extensions might become "pork," like our river and harbor improvements. The voting power of railway employees might be sought by politicians by promises of improved conditions of work.

A most serious consideration is the question of efficiency of management. A private and a public monopoly alike may become unprogressive. It may be that our system of regulation can be so developed that it will serve at once as a check upon abuses and as a stimulus to efficiency. It is not always best to decide today what can as well be decided tomorrow. Whether or not government ownership is coming, the perfection of the government control of our private railways would seem to be the wisest next step. Government regulation has already accomplished much in the United States. It has nearly eliminated rebates and personal discrimination; it has given stability to rates; it has strengthened railway credit; it has promoted uniformity in accounting; it has shown that it can raise rates as well as lower them and that it can settle sectional disputes as to rates in a comprehensive way. There still remains the task of determining the amount of railway investment entitled to a return, of devising a proper control over capitalization, of perfecting the rate system, and of working out comparative standards of efficiency. We may well hope that government ownership will at least be deferred until more has been accomplished along these lines.

Government Regulation of Railways in the United States. — Railway corporations in the United States are almost all organized under the laws of the separate states. Formerly special laws were passed when a railway company was to be formed, but at the present time there are general laws specifying what conditions must be complied with in order that a number of persons may organize a railway corporation. The separate states have imposed a number of regulations and restrictions not only on the companies which they have chartered but also on others doing business within their borders. These relate to the safety and the comfort of passengers, train service, consolidations, pooling, ticket-scalping, discriminations between shippers and places, the issue of securities, and reasonableness of charges. Railway or public service commissions are found in all but a few states.

That a railway corporation is subject to government regulation in the interest of the public welfare has been clearly established by a long line of judicial decisions beginning with the leading "Granger" case of *Munn* vs. *Illinois*.[1] But the authority of the state governments has been greatly limited by two provisions in the federal Constitution. Congress having been given control over interstate commerce, the states must confine themselves in their regulations to commerce wholly within the state. And the Fourteenth Amendment declares that no state shall deprive any person of life, liberty, or property without due process of law or deny to any person within its jurisdiction the equal protection of the law. The courts have interpreted this provision to mean that neither a state legislature nor a commission created by it can fix rates even on *intra*state traffic without a review by the courts. The courts have often declared rate legislation by states void on the ground that it confiscated the property of the stockholders.[2]

Federal regulation of railways is based on the Interstate Commerce Act of 1887, which has been repeatedly amended, most extensively in 1906 and 1910. The following is a summary of the amended act, as in force in 1916:

[1] 94 U. S. 113 (1876).

[2] The Fifth Amendment imposes similar limitations upon the federal government.

The Interstate Commerce Commission consists of seven members appointed by the President with the " advice and consent " of the Senate, with terms of seven years, not more than four of the commissioners being from the same political party. The jurisdiction of the commission extends not only over steam railways but also over electric railways, telegraph, telephone, and cable companies, pipe lines, express and sleeping car companies, and to some extent over water carriers. The control in these cases extends to interstate traffic merely.

All charges and practices must be reasonable, but no general standards of reasonableness have been prescribed by Congress. Certain specific things are prohibited. There can be no discrimination between persons or places and no free passes or free transportation except to classes of persons specified in the act. The giving of rebates renders both shipper and carrier liable to punishment. Pooling is prohibited, and no railway may have any interest in any competing water carrier. When rates have been reduced to meet water competition they may not be raised again without permission. No common carrier may make any greater charge for a shorter than for a longer distance in the same direction, the shorter being included within the longer, unless authorized to do so by the commission. Carriers must file with the commission copies of all their rates and fares, and no carrier may make charges different from these published rates. Changes in rates require thirty days' notice unless a shorter time is permitted by the commission. The commission may suspend rates for a period of 120 days and a further period of six months.

Any person may make a complaint regarding rates or practices and the commission may institute inquiries on its own motion. It has power to fix maximum rates for a period of two years and may award reparation to shippers who have been overcharged. The orders of the commission may be reviewed by the courts as to questions of law but not as to findings of fact. A Commerce Court was created in 1910 to hear appeals from the commission's orders but this court was abolished in 1913, its jurisdiction being vested in the several district courts.

Section 20 of the act empowers the commission to require annual and special reports from transportation companies and to prescribe the form of the accounts which may be kept. Under this provision uniform classifications of accounts have been worked out in coöperation with railway accountants.

In 1913 Congress directed the commission to ascertain the value of all the property of every common carrier subject to the act. As to every piece of property there is to be ascertained the original cost to date, the cost of reproduction new, the cost of reproduction less depreciation, and other values, if any. In 1914 the commission was given authority to enforce the Clayton Anti-trust Act so far as it applies to common carriers. The main purpose of this part of the act is to prevent those intercorporate relationships which tend to lessen competition.

The commission is also charged with the enforcements of safety appliance and boiler inspection provisions and with matters relating to hours of service of employees and to railway accidents.

The Interstate Commerce Commission regularly employs about 700 persons, but the work of valuation has temporarily greatly increased this number. A general survey of its work each year is given in its *Annual Report* to Congress. Its 30 or more volumes of decisions, published as the *Interstate Commerce Commission Reports*, contain a vast amount of descriptive material concerning the rate structures and the practices of railways in the United States. Information concerning the mileage, capitalization, revenues, expenses, and traffic of railways will be found in its annual volume called *Statistics of Railways in the United States*.

QUESTIONS AND EXERCISES

1. Write a description of some railway system, giving its organization, capitalization, earnings, dividends, nature of traffic, territory covered, etc.

2. Make a digest of the opinions in the *Northern Securities Case*, 193 U. S. 197, and the *United States* vs. *The Union Pacific Railroad Company*, 226 U. S. 61.

3. If you have paid $200 for a share of stock in a monopolistic enterprise, have you a right to complain if government regulation so affects its earnings that the price of the share falls to $100?

4. Discuss the conflict of authority between state and federal commissions (*Shreveport Cases*, 234 U. S. 342).

5. Can one ascertain what it costs the railways to carry United States mails?

6. Can the passenger service be said to be a by-product of the freight service?

7. Compare some of the leading railways from the standpoint of density of traffic.

8. What would be the economic effects of a "postage-stamp" railway rate system, in which rates vary with the weight and nature of the shipment, but not with distance?

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CHAPTER XXVIII

INSURANCE

Nature of Insurance. — The essential idea of the modern institution of insurance is coöperation in the bearing of losses which are likely to happen to any one of a large group of persons but which will actually fall upon but few members of the group. It is thus directly opposed to gambling, although wagers have frequently been made in the form of the insurance contract. It may appear at first that the man who insures his house is making a wager with the insurance company that his house will burn, but this is in fact like betting on both sides of an event. If the man does not insure, he may be regarded as betting that his house will not burn, and by wagering with the insurance company that it will burn, he relieves himself of risk. For this relief he is willing to incur the *certain* loss of his premium. Insurance does not free the policy holders from loss, but it means many small losses in place of a few unbearable ones. In well-developed forms of insurance there is also no risk for the insurance company, because the amount of loss is approximately known in advance, as will be explained presently.

The question is sometimes asked whether insurance is productive in the sense that other economic activities are productive. The answer is decidedly in the affirmative, for the feeling of security that it makes possible is a real satisfaction which we are willing to purchase. Then too, there is a very important economic gain in distributing among many persons the burden of losses which would otherwise fall heavily upon a few. Furthermore, the relief of distress among the unfortunate without compelling them to accept charity is a distinct social gain, and finally, many of our business operations are facilitated by the

existence of a system of insurance. Prevention of loss is not properly a part of the idea of insurance, but nevertheless insurance as it exists today does have many tendencies in that direction, especially in such forms as fire and steam-boiler insurance. On the other hand, insurance causes a certain amount of loss by provoking to some extent incendiarism, self-mutilation, or suicide, and even normal persons are likely to be less careful when they know they are insured. On the whole, however, we can scarcely overestimate the importance to society of an institution which equalizes economic shocks and multiplies the incentives to thrift.

The Law of Probabilities. — A special profession (that of the actuary) and a special branch of mathematics have grown up as a basis of the institution of insurance. It is a knowledge of the law of large numbers that changes insurance from a wager to a business of a routine-like nature. If a coin is tossed a large number of times, heads will appear about as often as tails. This may be counted upon as practically certain, but with respect to any particular throw taken by itself, there is no way of telling in advance whether heads or tails will appear. This truth has been worked out and applied most definitely to life insurance, but in other business callings also an effort is made to gather data that will make possible the formulation of statistical laws as guides in making business plans.

Origin and Development. — Arrangements embodying the idea of insurance are found among the ancients, but the modern institution of insurance, although its origin is obscure, first becomes prominent in the loans on bottomry which became common during the thirteenth and fourteenth centuries. A loan on bottomry meant that money was borrowed by the owner of a ship and was to be repaid with interest at the termination of his voyage, but the principal and interest were not to be repaid if the ship was lost. Sometimes this took the form of insuring the captain's life, but no scientific system of life insurance appeared until the compilation of life tables.

Fire insurance received an impetus from the Great Fire of London in 1666, the first company organized upon strict mer-

cantile principles being the "Fire Office," organized in 1680. It had a brigade of its own to prevent and extinguish fires. In 1693 Edmund Halley made a report to the Royal Society regarding the mortality at various ages upon the basis of tables of births and funerals at the city of Breslau; but, practically, life insurance as a business dates from the organization of the "Old Equitable" in 1762.

Before this, however, there were many associations for conducting insurance upon a speculative basis, which entered into wagers of every conceivable description. "Even the morality of the newspapers of that day was shocked by such proceedings: we find the *London Chronicle* of 1768 thus declaiming, 'The introduction and amazing progress of illicit gaming at Lloyd's Coffee-house, is among others, a powerful and very melancholy proof of the degeneracy of the time. Though gaming in any degree is perverting the original and useful design of that Coffee-house, *it may in some measure be excusable to speculate on the following subjects:* — Mr. Wilkes being elected member for London; *which was done from* 5 *to* 50 *guineas per cent.;* — Mr. Wilkes being elected member for Middlesex, from 20 to 70 guineas per cent; — Alderman Bond's life *for one year*, now doing at 7 per cent; — On Sir J. H. [mark the modesty] being turned out in one year, now doing at 12 guineas per cent; — On John Wilkes' life for one year, now doing at five per cent. N.B. — *Warranted to remain in prison during that period;* — On a declaration of war with France or Spain in one year, 8 guineas per cent. But,' continues the sensitive journalist, 'when policies come to be opened on two of the first peers in Britain *losing their heads at* 10*s.* 6*d. per cent.* or on the dissolution of the present parliament within one year at 5 guineas per cent., which are now actually doing, and underwritten *chiefly by Scotsmen*, at the above Coffee-house, *it is surely high time to interfere.*'" [1]

In the United States, fire insurance was fairly well begun even in pre-revolutionary days. In 1830 the New York Life and Trust Company was organized, and twelve years later appeared the Mutual Life Insurance Company of New York, which is the oldest of the existing American life insurance companies which insure more than a restricted class of individuals. In the seventies numerous failures brought the "old line" life insurance companies into discredit, and in the following years this fact, together with the desire for cheap insurance, caused

[1] Walford, *The Insurance Guide and Handbook*, 4th ed., p. 27.

a marked development of assessment insurance, against which there has in turn been a reaction because of its unscientific basis. Subsequently the "old line" companies again suffered a loss of prestige on account of the scandalous extravagance and corruption revealed by official investigations. The evil practices had to do chiefly with the management of the surplus, which was not under legal control as was the reserve. (These terms will be explained presently.) The accompanying table shows the growth in American life insurance since 1850. The check in 1880 may be noted. Between 1890 and 1910 the total amount of life insurance in force in ordinary and industrial companies increased fourfold. The average amount in force per family was $319 in 1890 and $801 in 1910. It is perhaps needless to state that the average amount per policy is much larger than this in ordinary though not in industrial insurance. The foregoing does not include the insurance fraternal orders, which had 10,122,169 certificates and $9,839,909,282 of insurance in force in 1911.

Forms of Insurance Organization. — Fire insurance may be written by stock companies, by mutual companies, or by associations of individual insurers, known as underwriters and Lloyds. Mutual companies, again, may be either local (county or town) mutuals, state or general mutuals, or the manufacturers' mutuals. The local town mutuals have the advantage that they can be conducted with a very low cost of administration, but the stock companies seem best adapted to the business of fire insurance, since it is desirable that the risk of a conflagration should be spread over a very wide territory.

Life companies are also found both in the stock and mutual form. Theoretically the management of the latter is in the hands of the policy holders themselves, but in actual practice they must be managed by a small group of financiers. Life insurance companies are also classified according to the plans of premium payments: (1) "old line" level premium, (2) assessment, and (3) stipulated premium.

Where risk enters in modern life, companies are often organized to offer an escape from it through insurance even before enough

data have been collected to make possible the accurate prediction of the amount of loss. In addition to life insurance we have indemnity in case of sickness, accident, destruction by fire, wind, hail, or explosions of boilers or fly wheels, broken windows,

NUMBER OF POLICIES AND AMOUNT OF LIFE INSURANCE IN FORCE IN ORDINARY AND INDUSTRIAL COMPANIES, 1850 TO 1912 [1]

ORDINARY			INDUSTRIAL	
Calendar Year	Number of Policies	Amount (Dollars)	Number of Policies	Amount (Dollars)
1850	29,407	68,614,189	—	—
1860	60,000	180,000,000	—	—
1870	839,226	2,262,847,000	—	—
1880	685,531	1,581,841,706	236,674	20,533,469
1890	1,319,561	3,620,057,439	3,882,914	428,789,342
1895	1,940,945	4,917,694,131	6,952,794	820,746,562
1900	3,176,051	7,093,152,380	11,219,296	1,468,928,342
1905	5,621,417	11,054,255,524	16,872,583	2,309,754,235
1910	6,954,119	13,227,213,168	23,044,162	3,179,489,541
1912	8,159,103	15,555,901,171	26,521,655	3,684,054,893

and loss from burglary or the unfaithfulness of employees. Liability insurance in over a dozen different forms guards against loss from damage suits. It is impossible to take up the problems that are peculiar to each one of these branches, and attention will be confined to some of the leading features of life insurance and of what is called social insurance.

LIFE INSURANCE

Life Tables. — A life table or mortality table shows how many of a large group of persons of the same age will survive to each higher age. A number of these tables have been calculated, but the one generally used in this country is the American Experience table, a portion of which is here reproduced:

[1] Statistics from the *Insurance Year Book*.

Age	Living at Beginning of Year	Dying during the Year
10	100,000	749
11	99,251	746
12	98,505	743
13	97,762	740
14	97,022	737
15	96,285	735
16	95,550	732
17	94,818	729
18	94,089	727
19	93,362	725
*	*	*
90	847	385
91	462	246
92	216	137
93	79	58
94	21	18
95	3	3

With such data and with an assumed rate of interest and expense, it is possible to say with considerable certainty how much money must annually be collected from the policy holders in order to pay each one $1000 or other specified sum at death.

Premium Plans. — It would be possible to collect from those surviving at each age enough money to pay for the deaths that would happen during the ensuing year. This *step rate* or *natural premium plan* necessitates a larger and larger assessment with advancing age; that is, as the earning power of the insured is declining. This induces many persons who continue in good health to discontinue their insurance, thus leaving only an "adverse selections of risks" for the insurance company or association. It has become customary to arrange the payments on what is known as the *level premium plan*, the same annual payment being made throughout the life of the policy. This payment may be on the *ordinary life plan*, that is, the payments continue throughout life; or ten, fifteen, or twenty *limited payments* may be made, the policy continuing in force for life;

or the insurance may be for only a *term* of years during which the premiums are paid, the insurance ceasing entirely at the end of the term. This is the cheapest kind of insurance, for the insurance company knows that many of the insured will survive beyond the term, and to them no payment need be made, but when the insurance continues for life, the payment becomes a certainty in every case.

The Reserve. — If a level premium is charged, the income of the company in the earlier years of a policy exceeds the expense of carrying the risk, as measured by the losses on account of the deaths among the policy holders of like age. The portions of the premium not currently used must be held for the credit of the policy holder until the later years, a certain rate of interest being allowed. This accumulating fund is known as the *reserve*. In the later years of the life of a policy, the reserve is gradually drawn upon to meet the deficit arising from the fact that in these years the level premium payments will be insufficient to meet the cost of carrying the risk, — smaller, that is, than they would have been under the step rate or natural premium plan.

Surplus. — If the insured live longer than was assumed by the company in calculating its premiums, more money will be collected than is necessary to meet the obligations of the insurance contracts. This is one source of *surplus*. Again, the funds held in trust by the company may be invested at a higher rate of interest than was assumed in the calculations, and this is a second source of surplus. A third source of surplus is in keeping expenses below what was assumed in the calculations. (The addition which is made to the net premium to cover expenses is called "loading," and is commonly not far from a fourth of the gross premium.) The amounts paid in by those who subsequently lapse or surrender their policies do not all go to the surplus, for it is customary now to allow "surrender values" and "paid-up insurance"; but as these allowances are subject to a surrender charge, there is some addition to the surplus from the surrendered or lapsed policies. Out of the surplus are paid the dividends on the capital stock, if there be any, and the dividends to each policy holder, which in some cases are

credited or paid annually to each policy holder, but in other cases not until the expiration of a period of years.

Endowments. — What is ordinarily called an endowment policy is a combination of two distinct forms of contract. A simple life insurance contract promises to pay a certain sum upon the death of the insured; a *pure endowment* contract would pay a certain sum if the holder of the policy survives after a period of years. A twenty-year endowment insurance policy combining these two features means that payment would be made at death if that occurred within the twenty years, or at the expiration of twenty years if the policy holder survives.

This form of policy has been declining in popularity because in its ordinary form it is disadvantageous to the policy holder, unless he be so thriftless that he cannot be induced to save in any other way. If insurance could not be obtained in any other way, it might be wise to purchase such a policy, but the objects of saving and insuring can be more cheaply accomplished by separating the two features. If, instead of paying $50 for an endowment policy, the holder paid part of this for term insurance and put the remainder in a savings bank at three or four per cent compound interest, there might be more to his credit whether he lived or died. But when the loading is properly arranged, and with an annual distribution of surplus, the endowment policy performs a useful function as an encouragement of thrift. In fact, a very long-term endowment maturing at, say, age sixty-five, would best meet the needs of a great many persons. Many others, feeling that they lack the necessary determination to save regularly a portion of their incomes in the ordinary way, find the endowment policy a useful form of "compulsory saving."

These points will be made clearer by the following illustration of what becomes of the premium in the case of a ten-year endowment policy at age thirty-five with a premium of $107.70, when it is assumed that the mortality will be in accordance with the American Experience Table, that the company will earn three per cent on its funds, and that the expense charged each year to this policy will be as given in the table.[1]

[1] Report of the Wisconsin Joint Legislative Investigating Committee, 1906, p. 153.

Policy Year	Expense Charge	Mortality Charge	Deposit
1	$18.40	$7.96	$ 81.34
2	18.40	7.31	165.77
3	18.40	6.62	253.42
4	18.40	5.89	344.43
5	18.40	5.10	438.96
6	18.40	4.26	537.17
7	18.40	3.32	639.27
8	18.40	2.32	745.43
9	18.40	1.21	855.89
10	18.40	—	970.87
Totals	$184.00	$43.99	

Industrial Insurance. — The business of insuring the lives of workingmen in this country is characterized by the small size of the average policy, the large number of lapses, and the heavy expense of solicitation. The companies say that the workingman is so thriftless that it is necessary to collect the premiums through a house-to-house canvass by agents. The hesitancy shown by workingmen to insure in these companies is considered by some persons, however, as an evidence of their thrift. Which is the correct view may be shown by the results of an experiment which is now being tried in the state of Massachusetts. Savings banks have been authorized to organize insurance departments and to sell life insurance, but without employing paid agents or solicitors. The state bears the actuarial, medical, and certain other expenses. The workingman is expected to go of his own accord to the bank or to one of the agencies at convenient places. The whole system is supervised by a state actuary and a state medical director, and the safety of the plan is assured by a guarantee fund. Three forms of policies, limited to $500 each, are provided for: ordinary life insurance, endowment, and a combination of life insurance and old-age annuity. The plan has met with some success, but is still in an experimental stage.

State Insurance. — Insurance is well adapted to direct management by the State because the actual conduct of the business

is of a relatively simple and routine character and because the State can offer greater security and can command greater confidence than is possible in the case of a private corporation. Competition has had the effect of causing rival companies to invent many outwardly attractive combinations of policy conditions, but on the whole it has increased rather than decreased the expense of doing the business. When the State enters the field simply as an additional competitor, as in New Zealand, its full advantage is not apparent; but if it has a monopoly of the business and compels every one to insure, it can perhaps, without any selection of risks, effect the insurance at a lower price than is asked by any existing private company.[1] In 1913 the state of Wisconsin began the sale of life insurance. The main object of the law is the reduction in the cost of insurance by reducing the expense of solicitation and administration. The credit of the state is involved only to the extent of the life fund created by the insurance act. In Italy life insurance is a state monopoly.

State Regulation. — Following the example of Massachusetts in 1858, other states have appointed insurance commissioners for the supervision of this business, and the insurance laws of a single one of these states are now sufficient to make a good-sized volume. Insurance companies have found this variety of control irksome and have generally advocated federal control of insurance. Although something would be gained, it cannot be said that there is any great need of federal control of life insurance, not to mention the constitutional difficulties, because it is not absolutely necessary, as in transport or fire insurance, that one life company do business in many states, and the people of each state should have the power to say what kind of insurance institutions they desire to have.

An enumeration of the requirements in the state of New York will illustrate the nature of state regulation: A certificate of authorization must be obtained from the Superintendent of Insurance and a deposit of securities must be made. A minimum capital stock is prescribed and regulations are made concerning

[1] Consult the article by M. M. Dawson in Bliss, *Encyclopedia of Social Reform*, new ed., p. 637.

the investment of stock and surplus. There are also provisions relating to standards of solvency, reinsurance, limitation of risks, admission of foreign companies, examination of accounts, and annual reports. The policy must contain the entire contract, and the statements are to be taken as representations and not warranties. No misleading estimates and deceptive statements are to be issued for the purpose of getting business. Life insurance companies are to do either a participating or non-participating business, and in the former case the surplus must be annually apportioned and paid to each policy. There are further provisions regarding the valuation of policies, surrender values, discrimination, election of directors, limitation of the amount of new business each year, limitations as to expenses and salaries of officers, and standard forms of policies are prescribed for both life and fire insurance.

Social Insurance

Social Insurance Defined. — Social insurance refers to those insurance or quasi-insurance institutions which are organized by the state to alleviate the distress which is likely to fall upon the poorer classes as a result of accident, sickness, invalidity, old age, unemployment, and the premature death of the chief wage earner of the family. All insurance is obviously social in the sense that it implies coöperation on the part of many persons and is subject to extensive state regulation, but what is called social insurance implies the activity of the state far beyond mere regulation. It is true that private activity has done much in the direction of workingmen's insurance, but it is because these efforts have proved inadequate that the movement for social insurance has gathered force. It is to be distinguished from poor relief in that it recognizes that the normally thrifty wage earner cannot purchase adequate life and accident insurance from private commercial companies and that the responsibility rests on society to provide that which it is impossible for the individual to provide. It endeavors by insurance methods to provide in advance for the coming of the evil day, so that the

benefits paid will be received, not as a matter of charity, but as a matter of right.

Compensation for Industrial Accidents. — In the United States social insurance has begun its development in connection with the problem of industrial accidents. Under the common law, the employer is not responsible to an employee injured while at work if a reasonably safe place to work has been furnished. Even if the employer is at fault, there is no redress if there has been contributory negligence on the part of the employee or one of his fellow servants or if the accident happens without negligence that can be traced to any particular person. This law of negligence has generally been modified by legislation designed to increase the responsibility of the employer, as, for example, by the restriction or elimination of the fellow servant doctrine.[1] While employees have sometimes been able to secure damages amounting to small fortunes, the general result of this legal system is that in the vast majority of cases only small damages or none at all are secured, or, if secured, they are in large part offset by the cost of litigation. The liability of the employer, however, is a serious matter to him, and an expensive system of employers' liability insurance has grown up. The more severe the modifications in the law of negligence become, the higher are the rates imposed by the liability companies. Such is the expense of conducting this business that it is safe to say that less than one half of the money paid for employers' liability insurance premiums ever reaches the injured employees in damages. While labor leaders were drafting bills designed to increase still further the liability of employers, attention was turned to European practice, where the view had come to prevail that it is useless to try to locate the responsibility for accidents, except for purposes of preventing them in the future, and that if a workman is injured in the course of his employment, he should be promptly assisted, even if he had been negligent. Accidents were looked upon as a trade risk against which the workingman should be adequately insured.

[1] See Chapter xxiii.

The result was that in the years following 1910 a wave of workmen's compensation legislation swept over our northern and western states. By the end of 1914 over one half of our states had enacted compensation for accident laws. The federal government had in 1908 established a system of compensation for industrial accidents for the majority of its industrial employees. During the first five years of its operation $1,804,000 was paid out as compensation, nearly one half of which was paid to employees of the Isthmian Canal Commission. The law did not abolish the criterion of negligence, as according to its terms accidents resulting from the misconduct or negligence of the injured person are not compensated. The amount of compensation is the injured workman's wages during disability, not exceeding one year, or in fatal cases, an amount equal to one year's wages. In other respects also the law does not conform to an ideal compensation law and efforts have been made to amend it.[1]

The provisions of the various state laws differ greatly in detail, but it may be said that in general they provide for definite payments to injured workmen in hazardous employments, practically regardless of negligence and almost universally at the expense of the employer. In some states the law is compulsory, that is, the employer engaged in the industries covered must pay the compensation specified and must insure himself against the liability. In other states the law is nominally optional, the employer and employee being free to remain under the old law of negligence, but an inducement is given to them to choose the new compensation method by providing that if either does not accept it, he is put to certain disadvantages under the law of negligence. The purpose of this roundabout method (not always successful) of securing compliance is to overcome the difficulty that under our constitutional guarantees of freedom a direct compulsion might not be sanctioned by our courts, while the modification of the law of negligence is well established by precedent.

The following are the standards (abridged) recommended by

[1] *Bulletin of the Bureau of Labor Statistics*, No. 155, p. 77.

American Association for Labor Legislation for workmen's compensation laws:[1]

1. As to the scale of compensation: Medical attendance should be furnished. No compensation should be paid for a definite period at the beginning of disability, the period being not less than three nor more than seven days. The disabled workman should receive during total disability 66⅔ per cent of wages, not to exceed $20.00 a week and not less than $5.00. In case of partial disability the compensation is based on loss of earning power. In case of death, the employer should be required to pay funeral expenses, and the widow, if living with the decedent at the time of his death, or if dependent, should be granted 35 per cent of his wages until her death or re-marriage, with a lump sum on re-marriage equal to two years' compensation. Compensation may also be given to other dependents.

2. The general argument for compensation applies to all employments, but practical considerations may justify the temporary exclusion of farm labor, domestic servants (except in connection with hotels and restaurants) and casual employment not carried on for the profit of the employer.

3. Compensation should be provided for all personal injuries in the course of employment, and death resulting therefrom in six years, but no compensation should be allowed where the injury is occasioned by the wilful intention of the employee to bring about the injury or death of himself or another. The act should embrace occupational diseases which, when contracted in the course of employment, should be considered personal injuries for which compensation shall be payable.

4. Compensation should be the exclusive remedy; that is, the workman should not be given the option of bringing suit under the law of negligence.

5. Employers should be required to insure their compensation liability. Employers may maintain their own insurance fund under certain conditions, insure in a mutual association, in a state insurance fund, or in a private stock company.

6. An accident board should be maintained by the state,

[1] *American Labor Legislation Review*, vol. iv, p. 585.

the members of which should devote their entire time to the administration of the compensation law.

7. Provision should be made for the settlement of compensation claims either by agreement subject to the approval of the accident board, or if no agreement is reached, by arbitration, with an appeal to the accident board. Appeals from the decrees of the accident board should be allowed only on questions of law.

8. Provision should be made for full and accurate reports of all industrial accidents.

Occupational diseases are not included by the compensation laws of the several states, although the Supreme Court of Massachusetts has construed such diseases to be injuries entitling the employee to compensation. In Michigan, however, the contrary view has been taken.

Sickness Insurance. — Compulsory sickness insurance has been introduced in about one half of the large countries of Europe and voluntary subsidized sickness insurance in others, but we have so far left practically everything in this direction to private effort, although there are state miners' hospitals in five states and the federal government conducts a hospital service for seamen. Many students of the subject believe that sickness insurance will never be made effective unless it is made compulsory. It is significant that Great Britain, where the traditions, as in the United States, are against compulsion, made sickness insurance compulsory by the act of 1911. The majority of workers, by virtue of being employed, are assured certain benefits in case of illness, the cost of the insurance being met partly by the government, partly by the employer, and partly by deduction from the employees' wages. In Germany, where a system of compulsory sickness insurance was established as early as 1883, one third of the cost is borne by the employers and two thirds by the employees. The sickness insurance benefits in that country cover also the care in whole or in part for the first thirteen weeks of those injured as the result of industrial accidents, after which time the accident benefits are paid wholly from accident insurance funds, and include maternity benefits, funeral benefits, and sometimes sick benefits for the members of the

family other than the insured. Maternity benefits were added in England by an amendment in 1913. We have need for similar laws in this country and the framing of such laws may be looked upon as the next step in social insurance here.

Old Age Insurance. — We are familiar in the United States with a pension system growing out of past wars and with local pensions for firemen and policemen. Other countries have provided in a much more general way by pensions, subsidized voluntary insurance, or by compulsory insurance for the relief of persons incapacitated by old age. Invalidity and old age insurance is one of the three great branches of the German insurance system. It covers the great majority of the wage earners of both sexes. There are contributions in equal amounts by the insured workmen and their employers and a yearly addition is made to each pension by the government. The English law of 1908, on the other hand, provides for a straight pension to persons 70 years of age or over whose incomes are below $153 a year and who have not certain disqualifications mentioned in the act. The amount paid varies from 24 cents to $1.20 a week. The British system resembles poor relief more closely than insurance. For years an attempt has been made to induce the United States government to adopt an old age pensions system for its employees, but there has been radical difference of opinion as to whether such a system should be with or without contributions by employees. In this, as in the more general problem, a non-contributory pension may be the more advisable at the start, but a contributory old age insurance system is doubtless more desirable as permitting of more liberal incomes and as encouraging thrift.

Unemployment Insurance. — The solution of the problem of unemployment involves much more than insurance. The progress of industry should be made less irregular and men and opportunities for work should be brought together more readily. Attention is being turned at present in the United States to the establishment of a national system of labor exchanges. It is not to be expected, however, that unemployment can be eliminated. It is a misfortune which should be provided against by

insurance. Many European cities have made experiments in this field which have left much doubt as to the practicability of insurance as a general remedy for the evil of unemployment. But the British National Insurance Act of 1911 has instituted a great experiment which is tending to remove this doubt. By that act persons engaged in building, construction of railroads, docks, or canals, shipbuilding, iron-founding, construction of vehicles, and saw-milling are entitled to receive unemployment benefits. About a quarter of a million of persons are covered by the act. The cost of this insurance is met by contributions from employers and employees and partly from appropriations by Parliament.

Life Insurance for Workingmen. — Our private life insurance companies are selling a good many policies which are payable, not as lump sums, but in installments or annuities, to the survivors of the insured. Wage earners cannot often afford to purchase such policies, but the same object is to some extent attained by widows' and orphans' pensions. Beginning with 1912 such pensions have been made a part of the German insurance system. In the United States many state laws have recently been enacted providing for pensions to mothers in need of relief. While these American acts are to be viewed as a form of poor relief, they are significant as possible forerunners of a comprehensive system of workingmen's life insurance.

Objections to Social Insurance. — Aside from questions of constitutional law, social insurance is met with the following difficulties: (1) It implies a considerable addition to the wages bill and it has been urged that it is unfair to place this burden on the employers of one state unless similar burdens are placed on employers of other states. (2) It is contrary to the economic philosophy of those who wish to see state activity reduced to a minimum. (3) It has been charged that social insurance discourages thrift and that it leads to demoralization because it encourages malingering and staying at home for trivial ailments. Cases are cited in which a maternity benefit was spent on liquor by the husband, and one man is said to have spent the maternity benefit in the purchase of a graphophone. It should be noted,

however, that all insurance is subject to abuse. Who would question the beneficence of fire insurance because it leads in some cases to incendiarism? Fire insurance companies do a good deal in the way of fire prevention. Similarly, not the least important aspect of social insurance is its relation to the conservation of the national health. The employers' associations in Germany organized for accident compensation have done much for accident prevention, and a system of sickness insurance gives timely medical and adequate care to many who now waste their money on patent medicines.

QUESTIONS

1. Define insurance.
2. What is a mortality table?
3. How would you find the premium for insuring a group of persons for one year for $1000 each?
4. Distinguish between reserve and surplus.
5. What is a "pure" endowment policy?
6. What are the advantages and disadvantages of assessment insurance?
7. What has been New Zealand's experience with State insurance?
8. What is meant by the "moral hazard"?
9. What are tontine policies?
10. Why is the "fellow-servant doctrine" not suited to modern conditions?
11. Discuss the possible effects of social insurance on wages.
12. Are old-age pensions a form of insurance?

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CHAPTER XXIX

AGRICULTURAL PROBLEMS

THE socialistic ideal of a highly centralized and delicately coördinated industrial system, discussed in the following chapter, is confronted with a sharp contrast in the agricultural industry as it exists to-day. Even in the most advanced countries, agriculture is still strikingly decentralized, and furnishes at once the best illustration and the most fertile source of economic individualism. Even in this country, where the movement of industrial consolidation has proceeded with unusual rapidity, agriculture has never been, and shows little tendency to become, a large-scale industry. The principal statistical evidence bearing upon this aspect of American agriculture is presented in Table I, on the following page.

Size of Farms. — So magnificent was the public domain of the United States that for many generations the number of farms increased more rapidly than the population and much more rapidly than the rural population. Between 1850 and 1910, for instance, the number of farms increased more rapidly than the population in four of the six decades. But such a movement could not continue indefinitely, and in recent years the relative number of farms has slightly fallen off. Even to-day, however, as shown in the last column of Table I, there is a larger acreage of improved farm land per capita than there was in 1850, and despite the rapid increase of population between 1900 and 1910, the increase in the amount of improved farm land almost kept pace.

This steady increase in the number of farms and farmers could only have been maintained by a general diminution in the average size of the farm. From 1850 to 1910 the average number of acres per farm decreased from 203 to 138, while the acreage

TABLE I

THE INCREASE OF FARMS AND THE CHANGE IN THE AVERAGE SIZE AND VALUE OF FARMS: 1850–1910

Census Year	Number of Farms	Per Cent Increase of Farms per Decade	Per Cent Increase of Population per Decade	Average Number of Acres per Farm		Average Value per Farm				Per Cent of the Value of All Farm Property in				Average per Capita (based on total population)	
				All land	Improved land	All farm property	Farm land and buildings	Land alone	Implements and machinery	Land and buildings	Land alone	Implements and machinery	Live stock	All land in farms	Improved land in farms
Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1910	6,361,502	10.9	21.0	138.1	75.2	$6,444	$5,471	$4,476	$199	84.9	69.5	3.1	12.0	9.6	5.2
1900	5,737,372	25.7	20.7	146.2	72.2	3,563	2,896	2,276	131	81.3	63.9	3.7	15.0	11.0	5.5
1890	4,564,641	13.9	25.5	136.5	78.3	3,523	2,909		108	82.6	—	3.1	14.3	9.9	5.7
1880	4,008,907	50.7	30.1	133.7	71.0	3,038	2,544	—	101	83.7	—	3.3	13.0	10.7	5.7
1870	2,659,985	30.1	22.6	153.3	71.0	3,363	2,799	—	102	83.2	—	3.0	13.8	10.6	4.9
1860	2,044,077	41.1	35.6	199.2	79.8	3,904	3,251	—	120	83.3	—	3.1	13.6	13.0	5.2
1850	1,449,073	—	—	202.6	78.0	2,738	2,258	—	105	82.5	—	3.8	13.7	12.7	4.9

of improved land per farm has remained nearly constant. Since 1880 we have had detailed statistics for farms of different sizes. Farms of all sizes have been increasing, but the increase has been greatest for farms under 50 acres in size, the relative importance of which has increased steadily since 1880. The relative importance of farms over 50 acres in size has decreased.

Broad statements of this kind cover a multitude of different movements and tendencies. Between 1900 and 1910, for instance, farms under 50 acres and from 175 to 1000 acres increased more rapidly than the total; whereas farms from 50 to 175 acres, and those over 1000 acres in extent, increased less rapidly than the total. In the North, between 1900 and 1910, farms between 20 and 100 acres in size decreased both absolutely and relatively; all others, including farms over 1000 acres, gained in relative importance.

In the South, farms smaller than 100 acres increased while those over 100 acres in size diminished in relative importance. In the West the movement was substantially the same as in the South: farms under 100 acres in size increased while all those over 100 acres in size lost ground, comparatively speaking, except the class of farms containing from 175 to 449 acres, which showed a small relative gain. In the North, particularly in New England, there seems to be a real increase in the number and importance of the large farms, those which in certain sections would be called "gentlemen's farms"; but this is more than counterbalanced by the partition of plantations of the South and of the cattle ranges and bonanza farms in the West.

Although the average farm decreased in size between 1900 and 1910, there was a striking increase in the value of the average farm and its equipment. In the last half of the nineteenth century no tendency towards the increase in capital value of the farm unit had appeared. The value of the total property and equipment of the average farm was actually lower in 1900 than in 1860; and the increase in the items of implements and machinery was quite in keeping with the rapid growth in wealth

and income in the United States, particularly among agricultural laborers and farm population. But between 1900 and 1910 the situation was, in appearance at least, transformed. As one commentator has aptly said, the selling price of farm property increased by a larger amount in the first decade of the twentieth century than it did in the entire period between the landing of Columbus and the close of the nineteenth century. The average value of all farm property per farm, as shown by Table I, rose from $3563 in 1900 to $6444 in 1910. The increase was greatest in the value of the land itself. In this decade the average value per farm of all farm property increased 80.9 per cent; that of land alone, 96.7 per cent; farm buildings, 60.3 per cent; implements and machinery, 51.9 per cent; farm animals, including poultry and bees, 44.4 per cent.

The full significance of this striking change is difficult to ascertain. In many respects is it more apparent than real and reflects merely the depreciation in the general purchasing power of the monetary unit. Thus, the average value of farm equipment per farm increased in a decade from $667 to $973, only 45.9 per cent, hardly more than the general increase in prices throughout the country and probably no more than the average income or ability of the typical farmer. So far as equipment is concerned it is probably no more difficult for the average farmer to secure the required amount of equipment today than it was twenty years ago. But the total value of farm land has increased more than 100 per cent, and the value of the land in the average farm has increased nearly 100 per cent. The movement is real and exceedingly significant so far as land values are concerned. Prices of farm products have increased more rapidly than most other prices. This has reflected itself in a rise in the value of farm land which is far greater than the rise in the general price level. It has become in many sections far more difficult than it used to be for the young farmer to secure a farm of his own, and in those districts tenancy has increased rapidly, while in many of them the population has actually declined.

Technically speaking, therefore, there appears no significant

increase in the size of the unit of agricultural industry. The farm unit is not growing in the physical or material sense in which the factory may be said to be growing. There is no consolidation or concentration such as we find in the manufacturing industries. But the amount of capital represented by the farm unit has increased strikingly in the last few years and probably much more rapidly than the average wealth or income of the farm population.[1]

So much for the size of the farm as it is; the next question concerns the size of the farm as it should be. Would the prosperity of the agricultural classes and the general welfare be increased by expanding or reducing the farm unit, by more or less intensive farming?

Obviously no simple answer can be given to this question. The value of the land or the rent it will bring is perhaps the most important factor: high rental value indicates that the margin of cultivation has been forced to a comparatively low point, and makes it both necessary and profitable to work the land intensively, for the same reason that the owner of a very valuable manufacturing plant is inclined to run it night and day, if possible, in order to reduce that part of the cost of production which represents fixed charges or interest on the capital that is sunk in the enterprise. In addition to the factor of rent, the amount of capital that he can command, the kind of farming in which he is most skilled, the character of the labor he can secure, the proximity of markets, and the adequacy of transportation facilities, all must be taken into account by the individual farmer in determining how large a farm he will attempt to manage and how intensively he will farm it.

Speaking generally, however, two powerful but counteracting forces can be detected in the agricultural industry, which prevent the industry from becoming either predominantly intensive or predominantly extensive. On the one hand, machinery can be employed most advantageously on a comparatively large

[1] "In recent years the value of farm lands has been increasing at the rate of about 5 per cent a year, or approximately $2 per acre per year." *Monthly Crop Report*, vol. ii, No. 4 (April 15, 1916).

farm, and, other things being equal, the use of labor-saving machinery is desirable. On the other hand, the importance of labor is greater, and the importance of the manager or entrepreneur is less, in agriculture than in manufactures; and on this account the stimulus given to the individual laborer by the sense of proprietorship is a far more potent factor in agriculture than in other industries. Large factories controlled by one entrepreneur employing hundreds of dependent workmen have proved economically superior in the manufacturing industry, because of the possibility of supervising the labor, checking and measuring its efficiency automatically. In agriculture, however, technical skill remains far more important relatively to those commercial or financial talents which distinguish the successful employer than in any other great division of production.

This question is primarily one of private profit, which the individual must decide for himself, but the legislator and the scientific student can assist the farmer by helping him to develop and use a system of sound farm accounting, and in keeping him awake to those changes in prices, wages, and transportation charges to which the farm organization must adjust itself. On the whole, however, the emphasis is wisely placed by the average educator, at the present time, upon the possibilities and opportunities of more intensive farming. In the past, extensive farming has been, and justifiably so, the rule in this country, and the force of inertia is all directed that way. But the demands of the future will be in the opposite direction. As cities multiply and the market approaches the farm, intensive farming will be forced upon the people, and the readier we are to adapt ourselves to this change, the less will be the friction and loss. Moreover, the ability to earn a living by intensive farming makes it easier to acquire a farm; and we are strongly of the opinion, as will appear hereafter, that widely diffused ownership is better than a general system of tenancy, even where land values are high.

Finally, it may be noted that practically every European country attempts by legislation to increase the number of small

holdings; and in a mixed problem of this kind, which is as much psychological and social as strictly economic, the instincts of the majority are likely to have a sound social basis. Even in England, where comparatively large farming has had the greatest opportunity and the most favorable environment, the consensus of opinion seems to favor the encouragement of small holdings. English authorities maintain, as a rule, that a mixed system of large and small farms is the ideal condition, but that at present the emphasis should be placed on intensive farming. In 1889 a (British) select committee on the subject recommended unanimously that "the extension of a system of small holdings is a matter of national importance"; and in 1892 Parliament passed the Small Holdings Act which empowers county councils to purchase land and sell or lease it in small holdings. Purchasers were required to pay one fifth of the price on taking possession, and the remainder in fifty years. In the beginning the act does not appear to have been a glowing success, and by 1903 only 62 small holdings, covering 248 acres, had been sold, and 166 buildings, covering 373 acres, let. In 1907, however, a new Small Holdings and Allotments Act was passed, special commissioners were authorized to ascertain the demand for small holdings in the various counties, and county councils were authorized to acquire land compulsorily. Between the passages of this act and the end of 1912 various county councils acquired 155,000 acres of land, all of which, except two per cent, was leased to small holders. In 1912 there were 292,720 small holdings (one to fifty acres) in England and Wales, of which 9937, or about 3 per cent, had been provided by county councils. While there is a marked difference of opinion in Great Britain on the subject, the weight of testimony and balance of opinion plainly incline towards the conclusions: (1) that an extension of small holdings is desirable not only from the standpoint of national well-being but from that of the agricultural laborer as well; (2) that agricultural laborers who employ farming methods suited to small holdings can make a decent living without an excessive amount of toil, in proof of which there seems to be a large unsatisfied demand for these small holdings; (3) that small

holdings under private land owners are likely to decline rather than increase in numbers, owing to insecurity of tenure and high rents; (4) and that in consequence the intelligent assistance of the government is needed to achieve the desired results.[1]

We would not be misunderstood. A universal system of small holdings would be good for no country, as a certain number of large farmers, assisted by abundant capital, are needed to set the pace in the improvement of agricultural methods. And in the United States, it is hoped, small holdings on the British scale will not have to be considered for many generations. But this country as well as England needs to cultivate that spirit which has made Danish agriculture, in spite of great obstacles, such a marvelous success; and it is imperative to avoid, if we can, the growth of those conditions which have drawn so much of the best blood of rural England to the cities. Both of these objects, we believe, will be measurably advanced by the encouragement of intensive farming.

Ownership and Tenancy. — The essential facts bearing upon the subject of farm ownership and tenure are summarized in Table II, printed on the following page.

Section *A* of the table shows that share tenancy is increasing in the United States, and that the proportion of farms operated by their owners was smaller in 1910 than in any earlier census year. Two interpretations of this phenomenon have been advanced. According to the first, which is based partially upon the statistics cited in Section *B* of the table, the growth of tenancy is due primarily to the increasingly rapid rise of farm laborers from the position of wage earner to that of tenant. In this view, accordingly, the increase of tenancy is encouraging. According to the second interpretation, based partially upon the facts presented in Sections *C* and *E*, the growth of tenancy is not an encouraging sign, and indicates that it is becoming more and more difficult to acquire ownership of land in this country. The statistics of ownership under *C* prove that there is a steady movement from tenancy to ownership as farmers grow older. More than 70 per cent of the farmers

[1] Cf. *The Report of the Land Enquiry Committee*, vol. i, Part ii, Chap. iii.

TABLE II

STATISTICS OF FARM OWNERSHIP AND FARM TENURE IN THE UNITED STATES: 1880–1910

		1910	1900	1890	1880
A	Per cent of farms operated by owners	63.0	64.7	71.6	74.4
	Per cent of farms operated by cash tenants	13.0	13.1	10.0	8.0
	Per cent of farms operated by share tenants	24.0	22.2	18.4	17.5
B	Per cent of males employed in agriculture:				
	Who are owners	—	42.3	42.0	42.2
	Who are tenants	—	23.1	16.6	14.5
	Who are laborers and others	—	34.6	41.4	43.3
C	Per cent of persons owning farm homes:				
	All ages	—	64.4	65.9	—
	Under 25 years	—	27.8	32.6	—
	25 to 34 years	—	45.3	49.8	—
	35 to 44 years	—	64.4	64.0	—
	45 to 54 years	—	70.7	72.3	—
	55 years and over	—	81.4	82.2	—
D	Per cent of owners of rented farms who own:				
	1 farm	—	80.0	—	—
	2 farms	—	11.4	—	—
	3 and under 5 farms	—	5.4	—	—
	5 and under 10 farms	—	2.3	—	—
	10 and under 20 farms	—	0.7	—	—
	20 farms and over	—	0.2	—	—
E	Per cent of farm homes owned:				
	Free	66.4	69.0	71.8	—
	Encumbered	33.6	31.0	28.2	—
	Encumbered, all ages	—	31.0	28.2	—
	Encumbered, under 25 years	—	29.3	21.9	—
	Encumbered, 25 to 34 years	—	35.5	31.9	—
	Encumbered, 35 to 44 years	—	36.6	31.8	—
	Encumbered, 45 to 54 years	—	31.8	30.2	—
	Encumbered, 55 years and over	—	24.6	22.6	—

The statistics opposite *B* are in the nature of estimates, a small number of female owners and tenants being included under "laborers and others." The aggregate percentages opposite *A* differ from those opposite *C*, owing to the fact that they were collected by different departments of the census, and apply to slightly different areas. The agricultural statistics published in the reports of the Thirteenth Census are not so detailed as those published in the reports of the Twelfth Census.

between 45 and 54 years of age, but only 45.3 per cent of those between 25 and 34 years of age, owned the farms which they operated in 1900. This steady advance is encouraging; but the comparison of the figures for 1900 and 1890 indicates that the *rate of advance* is declining. Moreover, the statistics presented in Section *E* show that the proportion of owned farms which were burdened with indebtedness was, for every age group, larger in 1900 than in 1890, and, in the aggregate, larger in 1910 than in 1890.

The statistics presented in Table II and the two interpretations of their meaning are not, in reality, inconsistent. Tenancy is more frequent in the South Central and South Atlantic states than in other sections of the country, and more prevalent among colored farmers than any other class. Here, evidently, tenancy does represent an advance. The negroes who are tenants today were farm laborers a few years ago and slaves a half century back. On the other hand, tenancy is also prevalent and growing in the richest farming district of the country, a district in which farm values are high and advancing very rapidly; and in this district — the North Central states — there is evidence of a close though not perfect correlation between farm values and tenancy.[1]

There is no cause for grave alarm concerning farm tenancy in this country. Although the census of 1900 revealed one landlord who owned 704 farms worth $4,545,230, Section *D* of Table II shows that 80 per cent of the landlords owned only 1 rented farm, and 96.8 per cent less than 5 rented farms; while the additional fact that 78.8 per cent of the landlords lived in the same county in which their farms were located proves that absentee landlordism has not developed to any extent in this country. But we cannot regard present tendencies with all the complacency exhibited by some writers.[2] For not only has it been shown that the increase of tenancy in the North Central states is probably due to the increasing difficulty of acquiring

[1] See H. C. Taylor, *Agricultural Economics*, pp. 224–250.

[2] See Twelfth Census, *Agriculture*, Part I, pp. lxxvii–lxxxi; and E. L. Bogart in the *Journal of Political Economy*, vol. xvi, pp. 201–211.

land consequent upon advancing land values; but tenancy is almost certain to increase as land values advance, unless the American farmer learns how to get a living from smaller holdings. And land values are increasing with almost startling rapidity. In the four years 1911–1915 the value of improved farm land in this country increased over 25 per cent. When land goes to $200 an acre, the average young farmer can neither save enough nor command enough credit to buy a farm of 160 acres and equip it properly. We shall have either more tenancy in the older sections of the country, as time passes, or smaller farms and a different type of agriculture. As stated above, the latter change would probably do more good than harm in the end. Our only fear is that the American farmer may not adjust himself to it rapidly enough.

And it is doubtful whether we ought to derive comfort from an increase in the proportion of owners — as shown in Section *B* of Table II — when this increase results from an exodus of the agricultural population to the cities, which must itself be regarded with grave apprehension. Some writers explain away the increase of tenancy by dividing the agricultural class into three reservoirs, — owners, tenants, and others (presumably laborers), — and assure us that the swelling volume of the middle reservoir is due to an increasingly rapid flow from the labor reservoir to the tenant reservoir, rather than a decreasingly rapid flow from the tenant reservoir to the reservoir of owners. But what about the flow from the labor reservoir to non-agricultural occupations? And how much of the diminution of ownership in trade and manufactures should be charged to the same movement of population from the country to the city? It is a condition, not a theory, confronting us, and when we start to explain this condition, it is not permissible to halt midway in the explanation.

Farm Labor and Earnings. — It is not difficult to understand the "exodus from the farm" when we consider the demands which farming makes on the industry and managerial skill of the farmer, the lure of city life, and the relatively small amount of cash which the farmer has at his command. The labor and drudgery of farm life are steadily being lightened, the income of the farmer has risen rapidly in late years, and as a recent writer tells us, "it is probably true that the farming population of the United States, consisting as it does of more than thirty

million people, has a larger average income per family than any other equally homogeneous group of individuals of anything like the same size anywhere in the world." But when taxes and interest on indebtedness are paid the average farm family has little actual cash to spend on amusements, and a careful estimate made by the same writer for the year 1909 " shows that after all the expenses are paid the average family has $724 of net earnings, of which $322 was earned by the capital invested in the farm, and $402 by the labor of the farmer and his family. These $724 of net earnings were received by the family in the following manner: $303 in cash, $35 as fuel, $125 as rent, and $261 as food furnished by the farm." [1]

There can be no doubt, however, about the improvement in the conditions and wages of farm labor. The movement of farm wages since the Civil War is described statistically in Table III, following. From this it appears that farm wages were higher in the last year for which statistics are available than ever before, if we properly discount the inflated currency in which wages were paid in 1866, 1869, and 1875. Moreover, the testimony is practically unanimous to the effect that the increased use of farm machinery has not only reduced the hours of labor, but has diversified and lightened the toil of the farm hand. Added to these evidences of increasing material comfort is the reassuring fact that the farm hand retains, in a large degree, his superior social position. The native white farm laborer usually eats at the same table with his employer, shares his social diversions, and in general mixes in the same social class on terms of approximate equality.

There is room, however, for much improvement. The hours of labor are long in the country, — 10 in winter, 12 in summer, 13 in harvest season, according to our latest information, — and, except on a very small number of farms, there are two or three months in the year when the laborer cannot secure full work. " The able-bodied, industrious man desirous of employing his full vigor continuously finds a limitation in the average

[1] E. A. Goldenweiser, "The Farmer's Income," *The American Economic Review*, vol. vi, pp. 46, 48.

TABLE III

WAGES OF FARM LABOR IN THE UNITED STATES FOR SPECIFIED YEARS:[1] 1866–1915

(Wages expressed in paper currency for the years 1866, 1869, 1875)

YEAR	PER MONTH		PER DAY AT HARVEST		PER DAY OTHER THAN HARVEST	
	Without board	With board	Without board	With board	Without board	With board
1915	$30.15	$21.26	$1.92	$1.56	$1.47	$1.13
1914	29.88	21.05	1.91	1.55	1.45	1.13
1911	28.77	20.18	1.85	1.49	1.42	1.09
1910	27.50	19.21	1.82	1.45	1.38	1.06
1902	22.14	16.40	1.53	1.34	1.13	.89
1899	20.23	14.07	1.37	1.12	1.01	.77
1898	19.38	13.43	1.30	1.05	.96	.72
1895	17.69	12.02	1.14	.92	.81	.62
1894	17.74	12.16	1.13	.93	.81	.63
1893	19.10	13.29	1.24	1.03	.89	.69
1892	18.60	12.54	1.30	1.02	.92	.67
1890	18.33	12.45	1.30	1.02	.92	.68
1888	18.24	12.36	1.31	1.02	.92	.67
1885	17.97	12.34	1.40	1.10	.91	.67
1882	18.94	12.41	1.48	1.15	.93	.67
1879	16.42	10.43	1.30	1.00	.81	.59
1875	19.87	12.72	1.70	1.35	1.08	.78
1869	25.92	16.55	2.20	1.74	1.41	1.02
1866	26.87	17.45	2.20	1.74	1.49	1.08

condition of farming. Seed time and harvest make busy their respective periods, but whenever the frost of winter or the drought of summer suspend the activity of vegetation, there will be an interval in the work of the cultivator." [2]

[1] See *Crop Reporter*, vol. xiv, No. 3, and *Monthly Crop Report*, vol. ii, No. 3. Broad averages are particularly unsatisfactory in dealing with the wages of farm labor, and the reader should regard this table not as an exact exhibit of money wages, but as a compendious method of describing a movement the details of which are beyond the scope of this treatise. For more adequate discussions, see *Bulletin*, No. 26, Miscellaneous Series, and Bureau of Statistics, *Bulletin* 99, U. S. Department of Agriculture.

[2] J. H. Blodgett, "Wages of Farm Labor in the United States," p. 25. *Bulletin*, No. 26, Miscellaneous Series, U. S. Department of Agriculture, p. 25.

Furthermore, the best evidence obtainable supports the conclusion that while "skilled labor, owing to its contact with machinery and the influence of education, has attained increased efficiency," "unskilled and irregular labor has lost much of its former adaptability and value to the farm." [1] Worst of all, there is rapidly developing a class of migratory or casual agricultural laborers who drift from city to country and back again, who have no ambition to establish themselves permanently upon the land, and yet teach the farmer to rely upon their assistance, and debase the real standard of living of the laborer who adopts farming as a serious occupation, and looks forward to the acquisition some day of a farm of his own.

Farm Indebtedness and Agricultural Credit. — The favorite instrument by which land ownership is achieved in this country is the farm mortgage. As shown above, 33.6 per cent of the farms in this country were mortgaged in 1910, and this proportion had increased from 28.2 per cent in 1890. But this is not in itself alarming. The ratio of mortgage debt to farm value was only 27.3 per cent in 1910 as against 35.5 per cent in 1890, and the owner's average unencumbered equity per farm increased from $2200 in 1890 to $4574 in 1910. Moreover, the proportion of mortgaged farms in the latter year was higher in Iowa and Wisconsin than in any other states, although agriculture is particularly flourishing in these states. Statistics collected in 1890 indicate that nearly 65 per cent of mortgage indebtedness of farms is contracted for the purpose of buying the farms, from 15 to 20 per cent for stocking, equipping, draining, and improving farms, while probably not more than 5 or 6 per cent represents losses, household expenses, and "unproductive consumption." The farm mortgage accordingly is not necessarily a bad thing. It is "a mere business venture" and in this country has proved a successful venture in a surprisingly large proportion of cases.

If farms are operated more efficiently by their owners than by tenants or hired managers, it is obviously desirable to get the title to the farm into the hands of the farm operator as soon as

[1] *Final Report of the Industrial Commission*, p. 92.

possible. For this purpose some use of credit is usually necessary. Credit also must usually be used to secure the proper amount of farm machinery, stock, and other equipment. Agriculture today has become a highly capitalized industry, employing in this country, it is estimated, about twice as much capital as the manufacturing or factory industries. And the indications are that the average farmer at present cannot secure, or at least does not employ, enough circulating capital. Studies have been made of the earnings of farmers classified according to the amount of capital employed on each farm; and these indicate that, after due deduction for interest upon all capital employed, the remaining net income varies directly with the amount of capital employed, until the latter reaches $25,000 or $30,000. The New York studies indicate that farmers working with less than $5000 capital earn less than the ordinary farm hand in the same vicinity; and that in the districts covered, the average farmer cannot earn a fair return for his labor unless he has the use of from $10,000 to $20,000 worth of capital. The figures in question are possibly affected by the probable fact that it is the better class of farmers who are enabled to obtain the larger amount of loan capital. But whether this be the fact or not, it is obviously desirable that the farmer should be able to secure whatever amount of capital is necessary, at the lowest practicable cost.

At the present time credit facilities are not adequate in many rural districts. Recent statistics collected by the federal Department of Agriculture, for instance, show that the average rate for interest and commissions on farm mortgage loans exceeds 7 per cent in twenty-five states, and rises as high as 10 per cent in New Mexico, Montana, and Wyoming. This is the average rate, and there are presumably many instances of very much higher rates. The average commission which it is necessary to pay to the middleman or intermediary exceeds 2 per cent a year in certain districts of North Dakota, Oklahoma, and North Carolina. The average rate for interest and other costs on loans to farmers on personal security exceeds 10 per cent in twenty states and rises to 15.6 per cent in Oklahoma,

13.8 per cent in New Mexico, and to 12.4 per cent in Alabama. The average rate exceeds 12 per cent on 57.3 per cent of the loans reported in North Dakota, on 55.3 per cent in New Mexico, 25.5 per cent in Alabama, and 34.7 per cent in Colorado. Even in the state of Michigan 5 per cent of the loans on personal security cost the borrower more than 12 per cent a year. Recent investigations made by the Comptroller of the Currency also make it plain that in some sections of the country extortionate rates of interest are being charged by banks on farm loans; and that in some districts the farmers are really being exploited by rural "loan sharks."

American farmers not only pay an unnecessarily high price for the credit which they receive, but it is not supplied in the most convenient and suitable forms. The farmer who borrows to buy a farm or to construct a barn wants a loan for more than four or five years in order to avoid the trouble of expense and renewal, with the periodic danger of foreclosure. The loan should run in many cases for twenty-five years or more; the payment should be arranged so that the principal may be gradually extinguished as the interest is paid, and the farmer should retain the right to extinguish the entire principal whenever it became convenient or practicable for him to do so. In the case of short-time loans on personal security, similarly, the farmer does not want a sixty-day or ninety-day loan, the kind of accommodation which commercial banks prefer to give, but needs usually a loan running from six months to a year, in order to cover the waiting period between planting and harvest time. Moreover, the banks in some sections of the country at present force farmers who borrow from them to specialize in one crop — a money crop — in order to keep the security in some easily realizable form. American banks have in this way helped to prevent the adoption of diversified farming.

In Europe, agricultural credit is furnished at low cost and convenient terms by a series of mortgage land banks and farmers' loan societies or credit unions, which vary greatly in detail and structure but rest upon certain common fundamental principles. Long-time credit is provided by mortgage land banks, the oldest

form of which is perhaps the Prussian *Landschaft*. These banks lend to their members on real estate mortgage, and then issue bonds secured by the entire body of mortgages in such a way as to replace or reënforce each individual's credit with the credit or security of the whole group. In some of these associations all the property of the members is pledged for the support of the bonds, but experience makes it plain that this is unnecessary and that the mortgages themselves, under proper management, afford sufficient security to insure ready sale for the bonds. The associations or banks which provide short-time credit differ greatly in form. Some are stock companies, receive savings deposits, and obtain a considerable part of the money funds which they lend from stock subscriptions and deposits. In others a group of men simply pool their credit, borrow from outside sources on their unlimited liability, and lend the proceeds of these loans to the members of the union. Machinery, organization, and rules differ, but the fundamental principles and requirements are as follows:

1. A pooling of credit and securities so that the debt of each member is backed by the collective credit or good-will of the association.

2. Rigid scrutiny of the loan and the security by appraisers (usually neighbors of the borrower) who have every opportunity of knowing the circumstances of the borrower and the value of the security offered.

3. Limitation of credit to loans for productive purposes. The grant of credit for speculative purposes is strictly forbidden, and many societies provide that loans may be called if the money is not properly used.

4. Management in behalf of the borrower. This represents the most essential difference between the coöperative credit associations of Europe and the credit institutions of this country. Where stock is issued, each stockholder usually has only one vote, and dividends are limited, usually to the rate paid upon borrowed money. Additional earnings, if any, are turned into a surplus fund which, if the union is dissolved, goes to charity or some public purpose.

5. Adaptation of the period and terms of the loan to the needs of the creditor, with provision for amortization and permission to pay off the loan whenever the debtor finds it possible.

Coöperative credit associations or rural banks have multiplied rapidly all over Europe. They have greatly reduced rates of interest to farmers, and do an enormous amount of business at low cost and with very little loss. Large central or district associations have been established which bring the rural societies in touch with city money markets, help to procure funds for the local associations, and guide their activities by constant inspection and audit. As a natural corollary, cooperative supply associations have been developed in many places, which furnish fertilizers, farm machinery, seed, and other supplies to members at the lowest possible prices. In New Zealand and Australia the State itself has, apparently with entire success, undertaken the function of lending money to farmers for the improvement and development of agricultural land. In this country a few states have adopted laws facilitating the formation of rural credit associations, and in July, 1916, the President approved an act of Congress the purpose of which is well indicated by its longer title: "An act to provide capital for agricultural development, to create standard forms of investment based upon farm mortgage, to equalize rates of interest upon farm loans, to furnish a market for United States bonds, to create government depositaries and financial agents for the United States, and for other purposes."

This law represents an earnest attempt to give expression to the principles set forth on the preceding page. The machinery is perhaps necessarily, but unfortunately, cumbersome. The law creates a hierarchy of land banks, the control of which is centralized in a Federal Farm Loan Board composed of the Secretary of the Treasury and four members appointed by the President, to serve for terms of eight years. This board is to be assisted by farm loan registrars to supervise the issues of farm loan bonds and to have custody of the mortgages and securities upon which they are based; by land bank appraisers to deter-

mine the value of properties offered as securities; by "as many land bank examiners as it shall deem necessary"; and by such attorneys, experts, and other employees as are required to conduct the business of the board. The country is to be divided into twelve districts, in each of which there shall be a Federal Land Bank with capital stock of not less than $750,000. The government is to supply this capital unless it is forthcoming from other sources, thus involving the government in a maximum stock subscription of $9,000,000. Government shares are to draw no dividends. It is obviously intended and hoped that these land banks shall operate through small National Farm Loan Associations composed of persons desiring to borrow money under the act; but in case such loan associations are not created rapidly or widely enough, provision is also made for joint-stock land banks, with a capital of not less than $250,000, only half of which need be paid in cash before operations are begun. The larger federal land banks are also authorized to create branches and if necessary to lend money through agents scattered throughout the country.

No provision is made for loans on personal property or personal security. Loans must be secured by first mortgages not exceeding in amount 50 per cent of the value of the land and 20 per cent of the value of the improvements thereon pledged as security. Interest rates are limited to 6 per cent; proper provision is made for the amortization of the principal while the interest is being paid; the loan may run from five to forty years and may be issued only to a person who is "at the time, or shortly to become, engaged in the cultivation of the farm mortgaged." Such loans may be made only for the purpose of purchasing land for agricultural uses; to provide for the purchase of equipment, fertilizers, and live stock; to provide for buildings and the improvement of farm lands; or to liquidate the indebtedness of the owner of the land mortgaged.

The greatest danger of such legislation, perhaps, is that the extension and multiplication of credit will increase the demand for land, raise its price, and so injure the very classes which it is designed to aid, namely, young farmers and tenants who are

working hard to acquire title to the farms which they operate. Moreover, there is an important connection between the interest rate and the price of land which must be considered in this connection. Land value is frequently expressed as "so many years' purchase," *i.e.* so many times the annual rent or net yield, the number of years' purchase depending upon the interest rate. Roughly speaking, "twenty-five years' purchase" corresponds to a four per cent interest rate, "twenty years' purchase" to a five per cent interest rate. If we reduce the interest rate, will we not automatically increase the price of land?

While there is a real connection between land values and the interest rate, it does not follow that a reduction of, say one fifth, in the interest rate will be followed by an increase of one fifth in the value of land. The interest rate which largely controls in this connection is the rate on purchase-money mortgages, which do not include so large an allowance to cover risk and similar costs as do the other and smaller farm loans, interest on which it is the primary purpose of this legislation to reduce. In consequence, while it is probable that improved credit will tend to raise the price of land, it is almost certain that the increase will not be commensurate with the relief to the farmer afforded by the reduced cost of loans.

Tenancy versus Encumbered Ownership. — At this point it is necessary to discuss briefly the question when and where — if ever — tenancy is to be preferred to land ownership. For though it may come as a surprise to some American readers, many foreign authorities of the highest rank strongly advocate tenancy in preference to ownership when land has become very valuable. In the expert evidence given before the British committee of 1906 on small holdings, for instance, the balance of opinion seems to have inclined toward tenancy rather than ownership.

Here again we meet one of those mixed economic and psychological questions to which no simple answer can be given. In a frontier or newly settled community, there is, of course, little reason for tenancy from any standpoint. But in an old community, where land values are high and are as likely to fluctuate

downwards as upwards in the next score of years or so, the economic arguments in favor of tenancy are exceedingly strong if not altogether convincing. (1) Under such circumstances the farmer who insists upon holding the title to the land which he tills must either go deeply into debt, or understock his farm, or both. To underequip the farm means poor agriculture; and a heavy debt hangs like a millstone around the neck of a farmer when land values are not on the increase. The tenant farmers of England have had a far more pleasant time since 1873 than the small landowning farmers whose holdings were encumbered with debt at that time. (2) The ownership of land throws upon the farmer all the responsibilities of the speculative entrepreneur, and other things being equal — *if they can ever be regarded as equal* — it is desirable for the man of small means to avoid these responsibilities. The tenant system offers a means of insurance against some of these risks. (3) Such insurance becomes all the more advantageous and encumbered ownership all the more disadvantageous because of the well-known fact that land yields a net return, year by year, lower than almost any other form of property. Part of this is due to the social prestige of landownership and part to the fact that over very long periods the small annual profit on land is likely to be compensated for by an increase in the selling value of the land. Under such circumstances landownership is partly a luxury and partly a method of saving, usually for the descendants and heirs of the saver. Both factors conspire to make land a poor investment for the man of small means. He cannot afford luxuries, on the one hand, and he must find a business calling, on the other hand, that yields him a quick return. (4) And finally, it must be noted that the question of tenancy is not like the labor problem which has developed in the factory industries. The tenant is not a wage earner. He may be as independent as the manufacturer who hires the land, buildings, and possibly the machinery with which he works. The problem of tenancy, therefore, has no necessary relationship to the problem created by the existence of a class of permanent wage earners. The small entrepreneur still holds the field in agriculture, all over

the world. The question is simply whether he shall hire his plant or own it.

Notwithstanding the fact that tenant farming may go hand in hand, as it does in England, with good farming, and notwithstanding the desirability of reducing the speculative risks of an industry which is at best much too uncertain, the problem can never be settled on economic grounds alone; and if we add to the economic virtues of ownership its social and moral advantages, the final verdict must be rendered against tenancy. Ownership not only spurs the zeal of the farmer, dignifies his occupation, and inculcates a love of the soil which nothing else inspires in so great a degree, but it gives the farmer a stake in the political game, steadies him, and thus improves his citizenship. It is perfectly plain that ownership cannot be enforced upon a people that are not prepared for it. And it is equally obvious that the virtues which go with ownership may and often do degenerate into vices: the peasant proprietor's love of the soil occasionally becomes land worship, his thrift avarice, his conservatism blind fear, and his industry cruel, — he drives himself and wife and children at a pace that would put the sweater to shame.

But we are not advocating the extension of landownership through state aid. We simply call attention to the desirability of fostering those qualities which lead to the diffusion of ownership and are in turn strengthened by ownership; and we maintain that the American people at present are in no danger of excessive thrift or of the sordid materialism of peasant proprietorship at its worst. The tendencies and the dangers are almost all in the opposite direction. If, in the next fifty years, the farmers of the Middle West become predominantly tenants, it will not be because tenancy is economically and socially superior to ownership, but because the farmers of that district have not had the thrift to save and the ability to adapt themselves to more intensive agriculture. And the step will be backward, not forward. The popular instinct which in this country causes an increase of tenancy to be regarded with distrust is a sound instinct.

A minor disadvantage of tenancy is found in the fact that tenancy, when it becomes predominant, raises difficulties that can only be met by constant State interference. Short leases, with no indemnification to the tenant for the improvements which he has made, lead to rack-renting, exhaustion of the soil, and class hatred between landlords and tenants. Long leases, on the other hand, afford insufficient protection to the landlord; because when prices are high the tenant thrives and pays his rent promptly, but when prices fall rents go unpaid and the landlord has no real redress. In England the situation has been met by a system of short-time leases together with compensation to the tenant — a legal obligation which the landlord cannot escape by "contracting out" — for any improvement made by the tenant whose value he has not exhausted. Neither party can abrogate a lease without a year's notice, although by mutual consent this may be reduced to six months. This system permits rentals to be adjusted frequently as prices change, rules out excessive competition, protects the landlord, and warrants the tenant in making any improvement required by good farming, since he knows that, if the landlord orders him out, he can collect on his departure the actual value of improvements made by him, whose benefits he has not had time to reap. In practice, the incoming tenant usually pays for the unexhausted improvements, and disputes are settled by arbitration. Under this system, "the relation between landlord and tenant is very satisfactorily arranged, the farmers are, as a rule, contented with the present system, and the fields of England prove that landownership on the part of farmers is not essential to good agriculture." [1]

Marketing of Farm Products. — The work of the farmer is not finished until he has successfully sold his produce. Comparing the price received by the farmer with the retail price of the same produce, many critics have complained that the intermediate distributive [2] process is wasteful and expensive. But careful investigation of the necessary costs of marketing does not indicate, on the whole, that our distributive system is so inefficient as to call for complete replacement. Improvement of present methods, and not revolution, seems to be the proper solution.

On the other hand, the marketing system is manifestly defective at many points. The farmer himself is responsible for some of the most costly defects. He frequently does not show sufficient care in producing the exact varieties of products most in

[1] H. C. Taylor, *The Decline of Landowning Farmers in England*, p. 61.

[2] The word "distributive" is used in the popular sense in this chapter.

demand, or in sorting and crating them for market after they have been produced. Goods are carelessly and dishonestly packed; there is sometimes a dearth of buyers and sometimes a monopolistic agreement among buyers at country points.

There is also room for improvement in the transport of such goods from the country buying point to the wholesale markets. Many railroads do not have a sufficient supply of refrigerator cars and lack facilities for handling perishable goods. A sufficient number of cars is frequently not provided just when they are most needed, there are many avoidable delays in transit, and frequently great difficulties in adjusting and paying claims for damages. Generally speaking also, railway tariffs favor through traffic at the expense of local traffic and are thus partly responsible for the concentration of manufactures and population in the large cities, preventing that diffusion of people throughout the country which would furnish a large number of small local markets.

Among the wholesale dealers, particularly the commission houses, there is also room for improvement. Fraud and sharp practices have been common in the past. Well-organized and convenient markets have not been provided, there has not been enough inspection or publicity, and where the goods are disposed of at auction collusive agreements have frequently existed between particular traders and the auction company itself.

There is no simple or general remedy for these conditions. In order to secure good country markets, coöperation among farmers has proved successful and probably offers the logical and best way of disposing of farm products at country points. Coöperation has also been used successfully in the marketing of perishable goods, and here the commission system has been partly replaced by associations of farmers or growers such as the California Fruit Growers and Shippers Association, which maintains auction rooms in eastern cities and sells its own products directly. The Southern California Fruit Exchange in a few years reduced the cost of marketing California fruits from 10 per cent to 3 per cent of the selling value.

The coöperative marketing association and the intermediate

trader who buys from the grower and sells to the retailer have in common two points of superiority over the commission system. They replace the lukewarm interest of an agent by the care and solicitude of an owner, and by shipping in large quantities they are in position to obtain much better rates from the railways, to say nothing of the other economies effected by handling goods on a large scale. The coöperative marketing associations have also effected great economies by carefully studying prices in the various markets and distributing their consignments so as to get the highest prices prevailing at the time.

The independent trader, however, can select the most available market even more successfully than the coöperative association, and speaking generally we do not expect to see the commission house displaced by a coöperative machinery which transfers products direct from the farmer to the retailer. An intermediate mechanism is probably necessary. It is a logical and probably an economical manifestation of the division of labor. The actual purchaser or trader, however, will probably slowly displace the commission man; and there can be little doubt that the farmer has gained enormously by the substitution of the trader for the commission house in the marketing of the great staple products. The trader comes almost to the door of the farmer with constant bids for his grain. He is an expert in railway rates, is in constant telegraphic communication with the great markets of the world, and handles products in such large quantities as to reduce intermediate expenses to a minimum. Occasionally, as has sometimes been the case with the great line-elevator companies, he works in conjunction or in collusion with the railways, overbidding the small grain dealer, and forcing the railways to grant rebates on the large shipments which he commands. Even in this case, the farmer gains by the size and efficiency of the middleman (though the small dealer may suffer) because part of the economies effected — even those effected by discriminative railway rates — will come to him in the long run. Cases of monopolistic oppression are theoretically possible when there is only one buyer and one railway who are in collusion, and the farmer is deprived — because of high rail-

way rates — from shipping his products elsewhere. But the loss to the farmer through extortion of this kind has in general been much more than counterbalanced by the striking economies effected by the great trading companies; though this, of course, affords no justification either for monopoly or railway discrimination. Both should be suppressed, but in such a way as to save for the farmer the distributive economies effected by large-scale handling.

Finally, the government can be of great assistance, provided the laws under which it works are passed after careful investigation and designed to improve rather than revolutionize existing marketing machinery. Laws have been passed governing the grain trade, cold-storage warehouses, future trading in cotton, and the size and character of standard packages. More important still are the state laws providing for the regulation of commission merchants and the creation of marketing commissions.

Space does not permit a discussion of the laws regulating commission merchants passed by Minnesota (1899), New York (1913), and other states. Speaking generally, commission dealers under these laws must obtain a license from some state commission or official and post a bond for the benefit of consignors conditioned upon faithful observance of the law. The laws usually require licensees to keep an exact record of the circumstances of each sale and to make returns to shippers within a very short period after each sale. Either by the statute itself or by administrative ruling it is quite common to prohibit the commission dealer from buying consigned products for himself or from selling them to any other corporation or firm in which he has an interest. Licenses may be revoked for malpractice of the following kinds: making false charges for cartage, handling, insurance, or other services not actually rendered; failure to make prompt settlements with consignors; rendering false statements as to the sale or condition of the goods on receipt; sending out false information concerning prices or other market conditions; maintaining combinations to fix prices; violating or neglecting other features of the law. Not

a great many complaints have been registered under the Minnesota law, "due partly perhaps to ignorance of the law's existence, and partly to a feeling that it is hardly worth while to proceed under it. It may also be an indication that there has not been so much dissatisfaction among shippers as most people imagine."[1] According to most competent observers these laws have exercised on the whole a salutary effect and promise greatly to improve what has hitherto been one of the weakest links in the distributive chain, the ineffective commission merchant.

In a number of states commissions or departments have been organized for the purpose of improving marketing methods. For the most part these commissions have not accomplished any very concrete results up to the present time. What is most needed now is study and investigation rather than an attempt to introduce on a magnificent scale costly coöperative or other schemes whose practical efficiency has not been demonstrated either by practice or the most thorough advance study. Much more helpful and promising is the federal Office of Markets and Rural Organization, which by its careful investigations is gradually laying the basis for a scientific correction of the real defects and abuses which exist.

Speculation.—The modern marketing or distributive mechanism not only relieves the producer of a large part of the speculative risk which attends the transmission of raw material from the farm to the consumer, and calls public attention to this speculative element by collecting or concentrating it, but it is responsible also for a large amount of unnecessary speculation which many persons believe to be particularly injurious to the farmer. We are not here concerned with the general evils of speculation but with the prevalent belief that speculative dealing in futures tends to reduce prices. "What is generally urged is that the professional short seller, by his sales of fictitious wheat or cotton, creates a fictitious oversupply in the market, which is just as instrumental in depressing prices as would be an abnormally

[1] L. D. H. Weld, *The Marketing of Farm Products*, p. 453. The discussion at this point is largely based upon Professor Weld's admirable book.

large supply of actual wheat thrown on the market by the farmer." [1] This charge is frequently supplemented by the assertion that it requires less money in margins to " sell short " — or gamble on a fall in prices — than to " sell long " in anticipation of a rise, and that, in consequence, the weight of the speculative dealing in farm products is exerted in the direction of lower prices.

This particular charge against speculation is confirmed neither by *a priori* reasoning nor by inductive analysis. Every " fictitious " sale of wheat, to use that as an illustration, must be balanced by an equivalent " fictitious " purchase. The " bear " who sells October wheat in July, even though he may hope to depress the price of October " futures," exercises no harmful influence upon the actual July or " spot " price, which is controlled by the demand for and supply of actual wheat; and when October comes, " the short seller of July appears now as a buyer in order to cover his contracts, and if his trading has any effect on the market at all, it is to increase the demand, not the supply."

It is very plain that the fictitious market may be artificially influenced by speculative deals, but as a general thing the fictitious market is ruled by the actual market, not *vice versa;* and the only influence exerted by gambling in futures upon " spot " prices (with which alone the farmer is concerned) is a good influence. This influence arises out of the effect of future transactions in lessening price fluctuations and in modifying present use by anticipating future necessity. And the complaint that it requires less capital to " bear " the market than to " bull " it, as well as a great number of ingenious criticisms of a similar kind, would all be negatived — if they were true — by the inevitable consequence that *any permanent factor of this kind would be quickly appreciated by speculators and fully discounted.* In no market are influences of this kind more accurately detected or more quickly dissipated by competitive forces than on the produce and cotton exchanges.

[1] N. I. Stone in the *Report of the Industrial Commission,* vol. vi, p. 189 ff., from which other quotations cited in this section are also taken.

Actual investigations of prices confirm the theoretical argument made above. The average prices of spot wheat in September, October, and November — just after harvest, when the ordinary farmer is compelled to sell — have been nearer the average price for the entire year, since the speculative wheat market has become highly organized, than in the forties and fifties when wheat was sold like any other farm product. And there are reasons for the belief that speculation has not only equalized yearly fluctuations, but that the leveling has been up, not down, in the interest of the farmer who is compelled to sell after harvest, as opposed to the wealthier miller or trader who in the past carried over a supply for the lean months. "It is not uncommonly stated that in the last few years futures in the wheat market have not, in the long run, stood enough above 'spots' to cover all the expenses of carrying. Some suggested reasons for this are: cut charges for storage; the failure of outside speculation to maintain the market against hedging sales; the fact that the great elevators will buy wheat and carry it for what they can get, and perform the functions of both carrier and trader for the commission of one. In any case, the tendency is to bring all prices together." [1]

Not only does "speculation" tend to equalize price fluctuations between different points of time and between different markets, but it serves the exceedingly useful purpose of providing a "body of professional risk takers" whose function is to protect the actual merchandiser from many of the speculative risks inherent in modern business. This protection against risk is secured for the most part through "hedging," which has been defined "as a purchase or sale for future delivery intended to offset and thereby to protect an actual transaction in merchandise." The terminal grain elevator which has accumulated a large amount of grain sells a corresponding amount for future delivery and thereby eliminates nearly all of the speculative risks involved in its business. The miller who has taken a contract to deliver flour at some time in the future hedges by

[1] H. C. Emery, *Speculation on the Stock and Produce Exchanges of the United States*, p. 131.

buying future wheat sufficient to produce the flour called for in his contract. The country grain buyer who knows that an interval of time must elapse between the purchase of grain and its sale at the point of destination finds similar protection in a "future" which permits him to specialize in the distributive function of getting grain from the producer to the ultimate consumer with a minimum of speculative danger. There are similar operations in the cotton market.

Speculation in the narrow sense, and even more truly the highly-organized market which we associate it with, are responsible for a certain amount of harmful gambling which should be suppressed; but in their ultimate economic effects they are highly useful institutions designed to concentrate the uncertainties and risks inherent in the very nature of production for a future market. And it is important to note that hedging, the transaction by which risks are eliminated for those who prefer to specialize in the less dangerous types of profit-seeking, would be impossible without the more speculative traders who practically bet on future fluctuations of prices. To steady and reduce these fluctuations, provide a certain market, and eliminate the exploitation of the ignorant by the expert traders, speculation and the market mechanism which it requires seem to be necessary and inevitable.

QUESTIONS

1. Make a list of the economic factors which regulate the size of farms. Is the average farm likely to grow larger or smaller with the passage of time? Is the narrow economic conclusion concerning the size of the farm, based upon maximum net profit to the individual farmer, subject to modification by reason of social or moral considerations?

2. Has the net effect of the rural exodus been favorable or unfavorable to agriculture and the agricultural classes? to society generally?

3. Does the increase of tenancy in the Southern states represent progress or retrogression? in the North Central states?

4. Under what conditions is the cash rental superior to share tenancy? Would the "corn rent" — a sliding rental varying with the price of farm products — be superior to both? Are short leases better than long leases for the landlord?

5. Do the farmers in your locality suffer from the lack of credit facilities?

Have they any difficulty in finding safe and convenient investments for their savings?

6. What is the advantage of specialized farming over diversified farming? Do we imply, when we advocate diversified farming, that the farmer should "buy nothing that he can raise or make for himself"?

7. Is speculation a "necessary" or an "unnecessary evil"? Is it an evil?

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CHAPTER XXX

SOCIALISM

Socialism Defined. — Socialists seek the establishment of industrial democracy through the instrumentality of the State. Our political organization is to become also an economic industrial organization. Socialism contemplates an expansion of the business functions of government until the more important businesses are absorbed. Private property in income-yielding capital and land is to be abolished. Socialists make no war upon capital; what they object to is the private capitalist. They desire to socialize capital and to abolish capitalists as a distinct class. Their ideal, then, is not, as is supposed by the uninformed, an equal division of existing wealth, but a change in the fundamental conditions governing the acquisition of incomes.

Socialists usually say that labor creates all wealth. Land and capital, they hold, are merely passive factors of production, and their owners ought not to receive a share of the product unless they personally are useful members of the community. Labor is the active factor, and all production is carried on for the sake of man. Land and capital are simply the tools of man. Socialists admit that the owners of these tools must receive a return for them when industry is organized as it is now; hence they desire that these tools should become public property. They wish to make of universal application the command of the Apostle Paul, " If a man will not work, neither let him eat."

Distributive Justice. — Socialists, in common with a great many other people who do not accept their attitude toward the organization of industry, desire distributive justice. As to what constitutes justice they are not wholly agreed, but there is

among them a tendency to accept equality of needs rather than productivity as a basis. Some, it is true, have advocated an almost mechanical equality, but most socialists today would regard the question of a precise standard for the distribution of income as not of present importance. They are simply agreed in this, that the distribution of the present day is wholly unjust. They think that men today do not have equal chances in life and that there is too much special privilege. The rewards, they think, today go to those who are shrewd and cunning, who are skillful in manipulating stocks and bonds, or who are favored by inheritance with a good start, rather than to those who render great social service. The inventors, poets, authors, scientists, skilled mechanics, and factory managers, they allege, are the large producers, but they do not get the big prizes.

Varieties of Socialism. — The foregoing characterization applies to most persons who have been called socialists, but the genus contains a number of species which should be distinguished.

1. One group has been called "Utopian." This first group contains those who have become impressed with the evils of the present competitive system and propose the collective ownership of the means of production as a remedy, in much the same spirit with which a physician writes a prescription to cure his patient. There have been many attempts to picture to us how smoothly things would proceed if men could only be persuaded to adopt the collective ownership of land and capital. As a type of this class we may take Robert Owen. His life was contemporaneous with the Industrial Revolution in England, he himself being a successful manufacturer. He saw with his own eyes the evils of unrestricted competition, and was filled with an earnest desire to better the condition of the working classes. He is remembered as a factory reformer and promoter of voluntary coöperation, but yet he regarded these efforts as not sufficiently radical. He thought human nature must be reformed by careful training from childhood in an atmosphere of association, instead of in the self-seeking, commercial atmosphere which surrounded him. He spent his large fortune in an attempt to carry out his ideas regarding the reconstruction of

society. Among his projects was the founding of a colony at New Harmony, Indiana, where no private property or competition should exist. After a struggle of two years, the experiment ended, as most other similar enterprises have, a complete failure. In this group would also be placed Saint-Simon, Fourier, Cabet, Blanc,[1] and Bellamy.

2. The "Marxian" socialists call themselves "scientific," as distinguished from the idealistic writers just mentioned. They insist that they have no cure-all for the ills of society. Socialism in their eyes is, in the main, only an explanation of what is happening. The private capitalistic system is breaking down, they say, and the logical result must be the collective ownership of the means of production as the next stage in social evolution. They say that setting aside all question of "ought" or "desirability," collective ownership is coming, and we might as well adjust ourselves to it. The four leading features of the Marxian philosophy are: (1) the view of society as an evolutionary product; (2) the economic interpretation of history, according to which our whole social life, including our ideas concerning religion, art, marriage, etc., are but a reflex of past and present economic conditions; (3) the doctrine of surplus value, according to which the income of the capitalist class does not represent a return for the sacrifice of "abstinence" or "waiting," but results from the fact that through the ownership of the means of production its members can compel the laboring class to work a longer number of hours than is necessary to produce the wages which the laborers receive, what is produced in this additional number of hours being the source of capitalist income; and (4) the doctrine of the class struggle, which finds a deep antagonism between the capitalist class and the laboring class, that can only result in the overthrow of the former. Most socialists now believe that this victory will be won without bloodshed, as a result of a gradual increase in the strength of the socialist party as a political organization.

3. The Fabian Socialists, of whom the members of the

[1] Louis Blanc was less "utopian" than the others. He was transitional and in reality paved the way for the German and later "scientific" movement.

Fabian Society of England are types, have disapproved both of the founding of utopian settlements and of the philosophy of Marx. The aim of this society has been to spread socialistic ideas by the dissemination of knowledge on the subject, rather than by an organized political movement, advocating this or that reform as opportunity indicated. The membership has come largely from the educated middle class, and has never been very large, although the society has exercised a very great influence. Practically, the views of the more conservative socialists in France and Germany do not differ greatly from those of the Fabians.

The following words of the late Jean Jaurés on the method of realizing the socialist ideal are of interest in this connection:

"All Socialists, indeed, some openly, others with infinite precautions, some with a mischievous Viennese good-nature, declare it to be untrue that, taken as a whole, the economic material condition of the proletariat is getting worse and worse. It must be conceded, after taking account of the tendency to sink and the tendency to rise, that in the immediate reality of life, the tendency to sink is not the stronger. Once this has been granted, it is no longer possible to repeat after Marx and Engels that the capitalist system will perish because it does not insure to those whom it exploits the minimum necessities of life. It follows from the same admission that it has also become puerile to expect that an economic cataclysm, menacing the proletariat in its very existence, will bring about, by the revolt of the instinct of self-preservation, the 'violent overthrow of the bourgeoisie.'

"It is not by an unexpected counter-stroke of political agitation that the proletariat will gain supreme power, but by the methodical and legal organization of its own forces under the law of the democracy and universal suffrage. It is not by the collapse of the capitalistic bourgeoisie, but by the growth of the proletariat, that the Communist order will gradually install itself in our society." [1]

4. The Christian socialists. About the middle of the nineteenth century, such men as Kingsley, Maurice, and Hughes in England were much impressed by the misery of the poor, and they attacked the competitive system as being responsible for the evils which they saw. Voluntary coöperation and the elevation of the workingman's character seemed to them the proper

[1] *Studies in Socialism* (trans. by M. Minturn), pp. 167–169.

remedies. Thus their theories do not fall under the head of socialism as we have defined the term. There is another group who believe that the ideals of Christianity can only be realized through the abolition of private capitalism. In Germany and in France socialist movements have been organized by adherents of both Protestant and Catholic churches. In the United States there has been no similar movement, although we find the term Christian socialist occasionally employed.

5. State socialism is a term frequently used in German discussion to designate the views of those who favor an extension of the economic functions of government without any great change in existing class relations.

6. "Socialism of the chair" (*Kathedersozialismus*) refers to the views of university professors, particularly in Germany, who have advocated State interference with property rights to any extent demanded by public welfare, and have opposed the *laissez-faire* doctrines of the older economists. These men are not to be classed as socialists, the term being used as a reproach by their conservative opponents, and the designation has now chiefly historical significance.

7. Syndicalism may be mentioned here, although it is more akin to anarchism than to socialism, and is to be viewed as a form of labor organization. The term is derived from the French word for labor union. The syndicalists believe that the emancipation of the working classes is to be achieved, not through control of present government, but by means of the control of, first, industry and, second, government by labor unions. They advocate the use of general strikes and of other destructive tactics, such as sabotage. They are extremely pessimistic with respect to the outlook for the laboring classes. This doctrine had its highest development in France about 1908 and has had some following in England and America. The tactics of Syndicalism are condemned by the American Socialist Party.

Communism. — Communism was the term employed by Karl Marx to distinguish his own philosophy from the "utopian" schemes of such men as Owen, which he termed socialistic. But

today the reverse has become the common usage. Communism now very generally signifies the abolition of private property not only in production goods, but also in consumption goods, whereas socialists contemplate the retention of private property in income. In this case there would be provision of private property for every one, and in this one respect socialists emphasize and extend the idea of private property.

Socialism an Extension of Existing Institutions. — Our government owns the post office; most governments the telegraph. Nearly all own the wagon roads. Some own the canals and railways. Many governments own factories. Probably every national government does at least a little manufacturing. Most governments cultivate forests, and some cultivate arable land. We have only to imagine an extension of what already exists until government enterprise dominates in manufactures, mining, transportation, commerce, and carries on, in short, most productive enterprises, and we have socialism.

But saying that socialism is an extension of existing institutions may lead to a misconception. The elimination of private capitalism, it is supposed, would work a most radical change in many branches of our social life. The commercial spirit, socialists think, would be abolished, and with it all that is dependent upon it. We are trained today from childhood up, it is alleged, to try to "make money," and this accentuates the selfish elements in our nature; and it is therefore maintained that our present system does nothing to promote, and does much to hinder, the development of the brotherly spirit.

The Strength of Socialism. — Socialism makes perhaps its strongest claim in its plea, first, for a scientific organization of the productive forces of society, and second, for a just distribution of the annual social income. It is said that the present production of economic goods is small in proportion to population, but the socialist replies: "Naturally enough. Competition is wasteful. Two railways are built where one would suffice. Two trains run parallel between two cities where one would serve the public equally well. Three times as many milk wagons, horses, and drivers are required to serve the people

with milk as would suffice if the milk business were organized like the mail distribution in cities. Look at the shops, wholesale and retail, and see the waste of human force. Without competition, the dry goods business and the grocery business could be carried on with a third of the present expenditure of energy. Reflect on all the idle classes in modern society. Socialism would set everybody to work, and, making each one dependent on his own exertions for success, would stimulate all energies." The argument is a telling one, but it does not prove its point unless we grant that the present waste and idleness cannot be suppressed or greatly diminished without a departure from the fundamental principles of our present industrial order, or that the waste and idleness are not counterbalanced by advantages.

Justice is a strong plea in the socialist philosophy. It cannot be for one moment claimed that each one's income is at present in proportion to his services to humanity. Income in proportion to industrial merit is attractive to an ethical sentiment. But cannot we approximate justice in distribution on the basis of the existing order? There is nothing distinctively socialistic about the desire for distributive justice. It is a feeling that actuates those who work for the control of monopolies, for tax reform, for regulation of inheritances, and for labor legislation. The socialist simply differs from these people in his method of attaining his ideal.

The socialist criticism of the present régime is especially severe in the matter of unemployment. There are always some men able and willing to work who are seeking employment, and periodically, with the coming of crises and depressions, the lack of employment becomes widespread. Again, it is urged that today goods are made for sale, not for use, as they would be under the socialistic régime. Adulteration, deception, and "cheap and nasty" goods are the direct outcome of a system of private capitalism. In the socialistic state we are told the business of the shopkeeper is to help you find what you really need; at the present time it is to his interest to persuade you to buy what you do not need or what will give him the greatest

profit. The spirit of competition is to the socialist simply warfare. In every business establishment a good part of the most highly paid labor is devoted, not to the production of goods, but to finding a market. Ability to fight one's competitor is quite as essential in business as is the ability to turn out good products.

The Weakness of Socialism. — 1. Strong as may be the foregoing indictment of the existing industrial system, it is not sufficient to indicate that socialism is to be the necessary or the desirable outcome. The modern machine age is little more than a century old, and some of its most important phases are very recent. The dire predictions made by Karl Marx and his followers on the strength of some of the earliest phenomena of the factory system have not been borne out, and similarly the evils of today may possibly be very largely eliminated without departing from our fundamental institutions. In short, the first weak point in the socialist's position is that he attempts to predict the course of economic evolution too far in advance. That we shall have a juster distribution of wealth in the future, and that we shall eliminate many of the present wastes of production seems probable, but whether this will be accomplished by a socialistic organization it would be very hazardous to predict. It is desirable to have ideals to work toward, but we should not pin our faith now to a future method for attaining them, for no one can say that the collective ownership of all of the important means of production presents a question that needs to be decided now.

2. The socialist underestimates the efficiency of the present system. In particular he fails to see the significance of the great and (in many respects) smoothly-working system of economic coöperation that has resulted from giving opportunity to free individual enterprise. To-day there is a premium on energy and thrift. Much may be wasted, but much is also produced. That socialism would result in a larger sum total of goods for consumption has never been proved. But, on the other hand, we can say that the present régime is continually offering more and more to the mass of the people. Their standard of life is continually rising. Our economic world is a bettering world.

3. The socialist is also in other respects too pessimistic with respect to the present. He sees all of the starvation, misery, luxury, and extravagance, but he passes by the millions of happy homes scattered throughout the land. He does not see that the world is full of opportunity for the rising generation, that even if the chance for the ownership of an independent business for the ordinary man is smaller, the things which he can enjoy, if he is of average intelligence and energy, are much greater than ever before in the world's history.

4. The socialist underestimates the importance of individual responsibility. Today a man is confronted by the stern necessity of making his own way, and this must have some good effect upon character. On the whole, the lazy and incompetent are sifted out. Bad heredity and a lack of proper training are the cause of a good part of economic misfortune. It is well to distinguish the criticism here made from the common error of supposing that socialism would necessarily crush individuality and that all would be compelled to dress and eat alike.

5. The socialist underestimates the importance of free enterprise in industry. If a man now believes that he can develop a certain industry that will satisfy important wants of the people in the future, he does not need to secure the consent of some government official to make the experiment. The possibilities of a free and spontaneous development should be safeguarded from governmental routine to every possible extent.

6. Perhaps the most frequently mentioned objection to socialism is the danger to liberty. Under socialism there would be simply the public sphere of employment, and there is reason to fear that the inability to escape from the public sphere would compel the submission to onerous and tyrannical conditions imposed by the administrative heads of the business in which one might be engaged. The socialists, it is true, have a rejoinder in the fact that this objection refers to liberty in the negative sense of freedom from interference rather than in the positive sense of the power to have and to enjoy goods, and yet there are many persons who fear the tyranny of the majority. Those in whose hands political and economic control centered

would have tremendous power, however they might be selected or appointed. As in the religious sphere in the past, so in the economic sphere in the future, we may find that compulsory coöperation is incompatible with human nature.

7. The Marxian socialists may be criticized for the importance which they attach to the economic interpretation of history, for the validity of that proposition does not establish the validity of the socialist contention. Even if it be true that our social life is a reflex of our economic activity, it still does not necessarily follow that our economic development is going to be such as will land us in socialism. Their doctrine of the class struggle also does not give an accurate account of existing conditions. We have a laboring class and a capitalist class, it is true, but there is also a considerable class, perhaps large enough to hold the balance of power between the other two, which does not sympathize exclusively with either laborers or capitalists. Moreover, we have yet other social classes, divided from one another by lines that cut across those separating the capitalists and the laborers. Race is, for example, the basis of a social classification that lessens the unity and cohesiveness of the laboring class.

Social Reform. — There are those who recognize the strength of the socialist's criticism of the existing economic and social order, but who believe it wise to attack the various problems confronting us one at a time. Social reform seems likely to accomplish more valuable results than socialism. We have a monopoly problem before us now. Its solution may involve a considerable extension of government enterprise. Why not concentrate our efforts upon that problem instead of making up our minds now whether some day the greater proportion of the industrial field must be collectively owned and managed?

The Socialist Movement. — In every country of importance at the present time there is an organized socialist movement. In Germany the Social-democratic party is the largest political party of the empire, having polled over one third of the total votes cast in 1812, although it has less than 28 per cent of the seats in the Reichstag. The growth in votes and representation is shown in the following table:

Year	Socialist Vote in Germany	Representatives in Reichstag[1]
1878	437,100	9
1881	312,000	12
1884	550,000	24
1887	763,100	11
1890	1,427,300	35
1893	1,786,700	44
1898	2,107,100	56
1903	3,010,800	81
1907	3,259,000	43
1912	4,250,400	110

Although the official platform of the party adheres strictly to the orthodox Marxian faith, the party itself has worked for many reforms tending to favor the lower classes, and a large element of the party (the "revisionist" wing) is in favor of putting the doctrine of the class struggle and complete collectivism in the background, and laying main emphasis for the present upon social reform. In France there are a number of socialist factions of various degrees of radicalism, nominally united in one party, the factional strife being one of the prominent characteristics of the movement in that country. Their combined representation in the Chamber of Deputies is about one sixth of the total membership. A member of the moderate group, Millerand, was made Minister of Commerce (1899) in the Waldeck-Rousseau cabinet. Since that time other socialists have accepted cabinet portfolios, but as individuals and not as representatives of the socialist party. In a number of French municipalities the government is almost completely socialistic in personnel. The result in these cases has been an increased public activity in behalf of workingmen, the poor, and the unfortunate.

In Belgium the success of the socialist party in promoting the coöperative movement has been striking. In England no one socialist party has attained the prominence of those in Germany

[1] The total number of seats in the Reichstag is 397.

and France. Some of the socialist organizations have joined with the trade unions in forming a Labor Party, which in 1914 had 39 representatives in Parliament. In the United States there are two rival parties, the Socialist party and the Socialist Labor party (of minor importance), both having platforms based upon the Marxian philosophy. The list of socialist officials in the United States in 1913 included 21 members of State legislatures, 34 mayors, and 612 municipal, county, and school officers. In 1912 a socialist was elected to Congress from Wisconsin. The elections of 1914 also resulted in the choice of one socialist member of Congress (from New York). In 1912 the presidential candidates of the two socialist parties polled 6.3 per cent of the total vote, the total socialist vote at four recent presidential elections being: 1900, 130,336; 1904, 441,776; 1908, 438,509; 1912, 931,406.

Socialists have rendered good service by calling attention to social problems, by forcing us to reflect on the condition of the less fortunate classes, by quickening our consciences; also by helping us to form the habit, acquired by few as yet, of looking at all questions from the standpoint of the public welfare and not merely of individual gain; finally, by calling our attention to the nature of the industrial functions of government and helping us to separate rationally the private industrial sphere from the public industrial sphere. A number of questions having no connection with socialism have been, even by socialists, not infrequently associated with it. Atheism and free love may be mentioned. Socialists generally, however, regard religion and marriage as changing institutions.

Anarchism. — In contrast with the socialist, the anarchist holds that the ideal social arrangement is that men should freely and spontaneously form coöperative groups. The anarchists attack government and deny the right of one man to exercise authority over another. Freedom, independence, self-reliance, non-compulsion, are what appeal to them. Such an ideal contains nothing reprehensible, but its complete attainment is impossible. Some governmental compulsion seems necessary with human nature as it is or is ever likely to be. The anarchist is

not opposed to the principle of association; he simply asks that the association be voluntary. The anarchist ideal is thus portrayed by Kropotkin:

"This society will be composed of a multitude of associations federated for all the purposes which require federation; trade federations for productions of all sorts, — agricultural, industrial, intellectual, artistic; communes for consumption, making provision for dwellings, gasworks, supplies of food, sanitary arrangements, etc.; federations of communes, among themselves, and federations of communes with trade organizations; and finally, wider groups covering all the country, or several countries, composed of men who collaborate for the satisfaction of such economic, intellectual, artistic, and moral needs as are not limited to a given territory. All these will combine directly by means of free agreements between them, just as the railway companies or the postal departments of different countries coöperate now, without having a central railway or postal government, — even though the former are actuated by merely egotistic aims, and the latter belong to different and often hostile states; or as meteorologists, the Alpine clubs, the lifeboat stations in Great Britain, the cyclists, the teachers, and so on, combine for all sorts of work in common, for intellectual pursuits or simply for pleasure." [1]

Many persons class anarchists and socialists together as simply dangerous persons. One thing they do have in common, and that is, discontent with existing conditions. Otherwise their views are in most respects radically divergent.

Anarchists differ among themselves. The "communist-anarchist" Kropotkin has advocated revolutionary tactics. Bakunine and Stirner also favored the use of violence. The "individualistic anarchists," such as Tolstoi and Tucker, have advocated a peaceful policy of non-resistance. Godwin and Proudhon may be called anarchistic reformers.

QUESTIONS AND EXERCISES

1. Is the public purchase of a street-railway system socialistic?
2. What is the attitude of socialists toward the trust problem?
3. Compare the Amana Society with the New Harmony Community.
4. What is meant by the economic interpretation of history? Is it accepted by thinkers who are not socialists?
5. Can the socialist be said to have a distinctive attitude towards war?

[1] *Memoirs of a Revolutionist*, pp. 398–399.

6. What is the relation between trade-unionism and socialism in the United States?

7. How should one measure the real cost of the supply of capital in a socialistic state?

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BOOK III

PUBLIC FINANCE

CHAPTER XXXI

PUBLIC EXPENDITURES

Nature and Significance of Public Finance. — *Public finance deals with the revenues of government, with their expenditure, and their administration.* Public finance is one part of economics. Like general economics, it deals with the means for the satisfaction of human wants. Some of our wants we satisfy in one way, some in another. Some we satisfy individually. Some we satisfy through private associated effort, especially through the private corporation. Others we satisfy through public collective effort, that is to say, through some governmental agency. The wants which we satisfy through governmental agency are not all of them so peculiar that they could not be satisfied either through private individual activity or private associated activity. Let us take the case of watering the streets. There are places in which the streets, in so far as they are watered at all, are watered by individuals in their private capacity, each man watering the street in front of his own house with his own hose. There are other places in which the householders join together and pay some one to water the streets for them, and do this privately. There are still other cities in which the city government employs persons to water the streets and pays them from the proceeds of taxation.

There are, to be sure, some wants which are satisfied through governmental agency and which a civilized community will not allow us to satisfy privately. This is the case with those wants which are satisfied by means of the police and the courts. It is a peculiar function of government in modern times to provide the inestimable blessing that we call security of person and property. This requires economic resources, just as the satisfaction of the other wants mentioned does, and public finance has to do with the provision of these resources.

Public finance, then, is a part of economics because it deals with the satisfaction of wants by the use of economic resources. It is also a part of economics because it has its influence upon the production, the distribution, and the consumption of wealth. But while we have to insist that public finance belongs to economics, it is more separated from the other parts of economics than they are from each other. Inasmuch as it deals with the satisfaction of wants through governmental agency, it has its own peculiarities, and it is only an undue emphasis upon these peculiarities which leads some writers to make it a separate science.

The significance of public finance may be brought before us by examination of, first, the increasing amount of public revenues, and of, second, the enormous aggregate of these revenues at the present time. Public revenues have gone on increasing during the past hundred years by leaps and bounds. An illustration is afforded by the history of France. Ninety years ago the public expenditures of France reached one thousand million francs for the first time, or, as we generally say, a billion francs. There was universal astonishment and alarm, just as there was when, for the first time, an American Congress spent a thousand million dollars in two years. Never since the time, however, when the public expenditures of France first amounted to a thousand million francs have they been so small. Gradually they increased until they reached two thousand millions, never to pass below that mark; then they increased until they touched three thousand millions; and now the national expenditures are nearly four thousand millions. Public expenditures at the present time, under the modern government, amount to more than a tenth part of all the wealth produced.[1]

[1] This estimate (that public expenditures equal one tenth part of all the wealth annually produced) has been given, but it must be a very considerable underestimate for the modern nation. We in reality know very little about the amount of wealth annually produced in the modern nations of the world. But such data as we have, and familiar observation, are sufficient to convince us that the wealth produced is not ten times the total public expenditures. In the United States, according to Starke M. Grogan, chief (Census) Statistician in Charge of *Wealth, Debt, and Taxation*, the total expenditures or "total governmental cost payments," including the

Now what does this mean? Does it signify increasing extravagance or even corruption? Quite the contrary. While the modern government is far from perfect, it is throughout the civilized world probably better than it ever has been before. Taking the civilized world as a whole, there probably never was more honest government or more efficient government than there is today. What it really means is this: We are living in a period of increasing public coöperation. We think we find it more advantageous to satisfy certain wants, growing in number and significance, through public coöperation than through individual effort or private coöperation. This is the chief significance of the increasing governmental budget throughout the civilized world. Militarism in its various phases is the chief phase of public expenditures that is disquieting.[1] Educational expenditures afford a good illustration of the general tendency. They run up into the hundred millions in the modern nation, whereas, previously to this century, they were insignificant. Expenditures for police protection, for public lighting, and for sanitation are things which, so far as any expenditures of magnitude are concerned, belong to this century.

Public finance has still another significance. Questions of social reform are now connected generally with financial questions just as formerly they were with constitutional questions. Public finance has become the central fighting place for social reform. The question of protection has, from the earliest days in this country, been connected with public finance. Police regulation has also been connected with fiscal measures. The license charge for the privilege of selling alcoholic beverages

national government, states, territories and local subdivisions amounted in 1913 to $3,284,343,266 or $33.83 *per capita*. Professor W. I. King (*Wealth and Income of the People of the United States*, p. 248) estimates the average income in the United States, for the year 1910, at $332 per capita. Public expenditures thus appear to take about 10 per cent of the income in this country. In England the *per capita* expenditure of the national government alone was, before the European War, over $15.50, and in France over $17. The 10 per cent estimate, then, is clearly an underestimate for most countries.

[1] This topic is adequately treated by Professor Charles J. Bullock in his article entitled "The Growth of Federal Expenditures," *Political Science Quarterly*, vol. xviii, pp. 97–111.

furnishes an illustration. The scope of the police power is expanding in the United States, and this means expansion of the field of public finance. The discussion of public expenditures reveals, as few other subjects do, the nature of our civilization.

Public and Private Expenditures Contrasted. — There is a difference between public and private economies with respect to the equilibrium between income and outgo. Relatively, there is an elasticity of government revenues and an inelasticity of government expenditures. This finds expression in the statement that *public revenues are gauged acccording to expenditures; whereas, in the private economy, the household expenditures are regulated by income.* This is a regular rule for normal conditions. It is abnormal when irregularities in public income lead to irregularities in expenditures. It has been observed by a critic that this principle of public finance is true in a legal sense, but not in an economic sense. It is said that when public expenditure is decided upon, then we legally determine the income; but, economically, the expenditures of the state rest upon a foundation as elastic as that of a private person.[1] It is true that in public expenditures there must be a balancing of gain and sacrifice, and that in the case of a particular expenditure it must be weighed over against all other possible expenditures, not only public, but private. The rich state, undoubtedly, will incur expenditures from which a poor but prudent people will probably shrink. On the other hand, a private person is not to be thought of as necessarily spending all his income, even if he gauges his expenditures by income.

Nevertheless, roughly speaking, the principle has significance because of the priority of the claims of the State. This has been well brought out by critics of Henry George, who advocated the appropriation of economic rent for public expenditures. Some of Mr. George's followers have replied to the objection that economic rent might not be sufficient for public expenditures: "Then the State must curtail its expenditures as the private person would do." When we think about it, we find that certain public

[1] Gustav Cohn, *Finanzwissenschaft*, S. 184.

expenditures must be made and must take prior claim. However, when, as is so often the case in cities, there is an income strictly limited by the tax rate, we have a situation like that of a man with a limited and inadequate income. This is an unfortunate situation for cities; but the case of a national government which did not have a prior claim upon wealth for defense would be anomalous.

Closely connected with what has been said, we find various differences due to the sovereignty of the State and its perpetual life. The State orders a citizen to give up a part of his possessions, and, indeed, frequently fixes the prices to be paid for them. And a peculiarity of the prices paid by all states for property and services is that they must be determined by criteria of fairness, inasmuch as by the very hypothesis competition is wanting wholly or in part. Consequently, we find courts and legislatures much occupied with the determination of what is "fair and reasonable." The perpetual life of the State has to be kept in mind in a great variety of expenditures. It is the special function of the State to provide for future generations, and this is seen, for example, in forestry and in care for rivers and harbors.

There is a difference between public and private economies in the means of measuring the utilities resulting from expenditures. It is at once admitted that all expenditures of states and of private persons should, in a large sense, be productive. Waste is everywhere an economic wrong, but productive expenditures mean simply useful expenditures. What the State produces is largely immaterial services, and these have no market price. How can we tell whether they are socially profitable or unprofitable? They are not worth while if they result in a sacrifice of other expenditures which would yield larger satisfactions. It is a special function of the legislative body, in a constitutional state, to decide upon the relative advantages of various possible public expenditures, and to weigh these over against the advantages of private expenditures which might have been made if the money permitting the expenditures had been left in private pockets. When a certain sum is taken from me by taxation, it results in a public expenditure instead of a private expenditure

which might have been made. This is only another way of saying that public expenditures are largely from income which is *derivative*. Private individuals secure an income and then yield a part of it for public purposes. These contributions are compulsory. On the other hand, there are economists who look upon the State as a factor in production, and hold that what is paid in taxes is less than what corresponds to the coöperative activity of the State in the maintenance of law and order and in other services. The special social significance of public expenditures is that their aim is *inclusive*, normally and regularly; whereas, normally and regularly, the aims of private expenditures are more or less *exclusive*. A public library contrasted with a scholar's private collection of books illustrates this point.

All these differences are considerable, and they give us perhaps at least one reason why business men are so often a disappointment in an official capacity. The public financier must be governed by the public point of view; and there are many points at which this diverges from the private point of view. The true statesman is one who has the public point of view, and yet is able to avail himself of the knowledge and experience of private business.

The Proper Proportion between the Total Income of Society and Public Expenditures. — We notice actual changes in this proportion, and we discover that further changes are advocated, running all the way from anarchism, which would abolish government and public expenditures, to socialism, which, by making production and distribution public functions, would make public expenditures, broadly construed, nearly equal to the total wealth production.

An attempt has been made by those who take a less extreme position than either of these to give an estimate of what is a large public expenditure, what a small expenditure, what is desirable, undesirable, or even intolerable. Generally these estimates are made with respect to the maximum expenditure, but we could equally well raise the question with respect to the minimum. One writer speaks of public expenditures of 16 per cent as average, and 25 per cent as excessive. Another regards public ex-

penditures which consume 15 per cent of the total annual wealth production as the upper limit. In our American practice, we very generally attempt to fix a maximum direct tax rate. But these limits are based on the valuation of property and not on income. State constitutions very frequently also limit state expenditures, as well as the expenditures of cities and other local units. For local purposes in the United States, we have roughly a tax limit of $\frac{1}{2}$ to 3 per cent of the value of property. Total taxation of real property frequently runs in the United States from 10 per cent to even 20 per cent of the net profits, and indeed not infrequently goes far beyond that. The truth is that it is absolutely impossible to give any general answer to the question, "What is the proper proportion between the total income of society and public expenditures?" Variations in the wealth of a country have to be considered, and these mean much when the question of additional expenditure is raised. Variations in tax systems and the consequent distribution of the burden of taxation make a wide difference. In times of distress, more can be expended than on ordinary occasions. When the national life of the State is endangered in a war, expenditures will be incurred which would be impossible at any other time, simply because for any other reason the people would not submit to the sacrifice involved.

But there are other points of view which go still deeper. Why do we spend money at all through the State? Obviously to satisfy needs. How much we should spend publicly depends upon what needs are satisfied publicly. We have to ask and answer the question, "What position do these needs hold among our needs in general?" "Do they belong to our necessities or superfluities?" When we consider public expenditures in the broadest terms, we must take into account the amount of production which is carried on by the State — employing this term "State" here as elsewhere in its generic sense. If the railways (as in Germany) are state railways, a larger percentage of the expenditures and revenues of the country are public in character than would be the case if they were privately owned and operated. No comparison of expenditures of various countries can have any

value if it does not take into account considerations of this kind.

Professor Adolph Wagner [1] lays down this rule, which is helpful in answering the question as to the proper proportion between the income of society and public expenditures for any particular time and place: "The permissible amount of public expenditures, both absolutely and relatively considered, will vary directly in proportion to (*a*) the direct economic value of state activities; (*b*) the extent to which these promote the productive power of all; (*c*) the absolutely free social income; [2] (*d*) the part of the net state receipts coming from the quasi-private acquisition (railways, industries in general) of the State and not from taxes." [3] Fortunately, how much we shall spend presents itself historically, that is, with respect to historical conditions, and has reference to increments or decrements of expenditure. The problem is far easier of solution than it would be otherwise.

In fact, except as a concrete historical problem, it is impossible to state how great the public expenditures should be. We are now in a position to understand why it is that the nations of the world have not been ruined by expenditures which even a generation ago would have been thought absolutely crushing, and one hundred years ago would have been inconceivable. We satisfy our needs to an ever increasing extent through public agencies. This finds expression in the *law of increasing public expenditures*, given by the writer from whom we have just quoted.

"*Comparisons between different countries and different periods show regularly among progressive nations an extension of public activities. This manifests itself extensively and intensively. The State and its subordinate political units continually undertake new functions, and they perform their duties, old and new, better and better. In this way, that is, through public agency, the needs of the population, especially their common needs, are satisfied to an in-*

[1] *Finanzwissenschaft*, 2te A., Bd. i., S. 65.

[2] *I.e.* beyond and above what is needed for subsistence.

[3] This means public ownership of enterprises which are so conducted as to yield profits. All the profits can and indeed must be expended for public purposes, whereas, if the industry were private, only a part of the profits could be taken for public purposes.

creasing extent; and the public services for the satisfaction of needs continually improve in quality. The clear proof of this is given statistically in the increased demands made by the State and the subordinate political units."[1]

We have here described what is a part of a still larger movement, namely, the socialization of production and the socialization of consumption. It is, however, the socialization of consumption which especially confronts us in public expenditures. To an increasing extent what is consumed by the family is produced outside the family. There has been going forward a great process of socialization, and this finds expression in part in public expenditures. The needs of the family are satisfied, in increasing proportion, not by the private economy, but by the public economy, and satisfied also, as Professor Wagner points out, not in accordance with the principles of private economy, which is service for service, but in accordance with the principles of the public economy, which is an adequate general return for that which is received.

We have to do with what we may also call socialization of supply. We do not protect ourselves against physical violence, but are protected by the State. We do not educate our own children; they are educated by public agency. And public expenditures are also made to promote art and all the higher interests of life. The services which the federal government renders us in the post office find expression in public expenditures. Public expenditures are giving us more beautiful and more healthful cities, and are satisfying the needs which arise out of the extensive growth of the country, in its expansion geographically and in the size of the population, and also the needs which arise from an intensive growth.

The significance of this lies partly in increased state activities and partly in the incidence of the cost of the services under consideration. The poor, who could not themselves have pleasure grounds, enjoy public parks, and these are maintained at public expense. So we may take up one service after another and find that wealth, produced in accordance with the principles of the

[1] Wagner, *Grundlegung der politischen Oekonomie*, 3te A., Bd. i, S. 893.

private economy, is consumed in accordance with the principles of the public economy, and that is very largely in accordance with needs and capacity for use. The whole public educational system, from the country district school to the modern state university, culminating in research and investigation, admirably illustrates this principle.

Extravagance, Economy, and Parsimony in Public Expenditures. — After a definition of economy in Webster's *International Dictionary*, we find the following: "Economy, Frugality, Parsimony. Economy avoids all waste and extravagance, and applies money to the best advantage; frugality cuts off indulgences, and proceeds on a system of saving. The latter conveys the idea of not using or spending superfluously, and is opposed to lavishness or profusion. Frugality is usually applied to matters of consumption, and commonly points to simplicity of manners. Parsimony is frugality carried to an extreme, involving meanness of spirit and a sordid mode of living. Economy is a virtue and parsimony a vice."

We must have clear ideas as to which course of the three we shall follow, for it is scarcely to be taken for granted that we shall follow the course of extravagance. There is, however, danger of indifference as to the size of public expenditures, and extravagance may result therefrom. While scarcely any one now would deliberately advocate extravagance so far as the general principle is concerned, extravagance in detail might be advocated; and, in fact, in practice we find both indifference and extravagance. Sometimes the idea that extravagance brings money into circulation has found favor, and especially has been used for the justification of large expenditures by royal courts. The same idea has been used as a justification for luxury. It can, however, find no support in economic principles. There is danger of extravagance because each one concerned with governmental expenditures feels that what he spends is a relatively small matter, and indeed it is. It is sometimes thoughtlessly overlooked that when many are spending, "small waste" becomes significant, and may be even ruinous. This is a problem which concerns every large business, and it requires strict and

wise administration to avoid the two extremes of wasteful extravagance and red tape.

Sectionalism also results in extravagance, and this shows itself badly in the United States at times. Whatever any state can secure from the federal treasury is often looked upon as so much clear gain. This was clearly brought out in the discussions concerning the repayment, several years ago, of the direct tax that had been paid by the states to the federal government. This tax has now been repaid, but many states gave agents large and extravagant sums to work for the refund. Sometimes sectionalism manifests itself even in cities. In one section of the city there may be vigorous efforts to secure money for itself without due regard for the general interest.

For many years, in this country, federal taxes were laid very largely for other than revenue purposes, and there was no careful balancing over and against one another of probable revenues and probable expenditures, with the result that there was frequently a large surplus in the federal treasury. There never has been a time when it would not have been possible to have expended wisely the entire revenues of the federal government; *e.g.* the telegraph might have been purchased, and educational expenditures might have been increased. But there was no demand for these expenditures strong enough to prevail, and the outlet was found along the lines of least resistance, or, perhaps it ought rather to be said, along the lines of greatest "pull." We may then lay it down as a general law that *there is danger of extravagance whenever public revenues outrun felt needs.*

In the domain of local government it is possible to limit taxes or expenditures, and, as stated above, American statute books are full of laws prescribing maximum rates for school, highway, and other tax levies. These laws have failed in the past because they were adjusted to our prevailing underassessment of property and it was perfectly easy to evade them by raising the assessment a little closer to the true value. More recently, however, Colorado and several other states have adopted "tax limit laws" which work successfully. Instead of limiting tax rates, the total tax levy or the total expenditures are limited to a

certain increase, say ten per cent, over the tax levy or total expenditures of the previous year; and some authority — usually the state tax commission — is empowered to raise the normal limit in "cases of emergency or urgent necessity." Tax limit laws applied in an arbitrary way may cripple, and in some cases have crippled, municipal governments in necessary and desirable expansions of public activity; but when administered by a wise board or commission authorized to modify the ordinary limit when necessary, they are capable of restraining harmfully rapid expansion of public expenditures.[1]

There is a tendency, especially wherever public spirit is not highly developed, to favor parsimony, and to regard that as the best administration which spends least, and the smallest tax as the best tax. This idea was particularly encouraged by those who looked upon government expenditures as external to the life of the people — as if they were expenditures for some outside person. This idea, indeed, may be traced back to monarchical government and to a time when royal courts consumed a large part of the public revenue. The smallest expenditure means the accomplishment of the fewest purposes. Parsimony means meanness, and can never be the rule either of public or private financiering. Frugality is the rule when it is a necessity. Economy is the sound rule; and this means a broad and liberal policy and a husbanding of resources. The wise citizen judges any particular administration either in the nation or the state, not chiefly by the *amount* of public expenditures, but by the *results* of public expenditures, appreciating full well that increasing public expenditures are a normal condition in a sound and healthy society.

The Development of Public Expenditures. — It is instructive to consider the historical order in which the objects of public expenditure appear. This order throws a strong light upon the evolution of industrial society and of civilization in general. This is an almost unworked field of investigation, but it is an extremely interesting and important one. This order can be

[1] See discussions of this subject in *State and Local Taxation* (Proceedings of the National Tax Association), Vol. viii, pp. 368–390, and Vol. ix, pp. 452–473.

presented here only in the most general terms, and in these terms it is somewhat as follows: Expenditures for (1) external security; (2) security within the community; (3) promotion of material interests; (4) benevolence (transferred in part from the Church at the time of the Reformation); (5) education in its various phases; (6) labor. In a general way the organization of the departments of the federal government corresponds with this order. In 1789, the Treasury, War, and State departments were organized, also the Department of Justice, Supreme Court, and the Navy Department; the Post Office Department was organized as a distinct department in 1829; the Department of the Interior was organized in 1849; the Department of Labor as a separate department (without representation in the Cabinet) in 1889; the Department of Agriculture as a separate department (with representation in the Cabinet) in 1889; the Department of Commerce and Labor (with representation in the Cabinet) in 1903. In 1913 Commerce and Labor were divided and given separate representation in the Cabinet. The modern nation has been spending an increasing proportion of its resources for education. (We use " nation " in the general sense here, including all the subdivisions of the nation.) We find a rapidly increasing item in the budget of the modern municipality for public libraries, in which line of expenditure the United States is leading the world. Lately, in the modern budget, we find expenditures which are distinctively for the promotion of the interests of labor.

Most interesting it is to observe, within the last few years, an expenditure in the national budgets for international agreements and arrangements to promote the interests of labor. In 1900, the International Association for Labor Legislation was formed, and its permanent Bureau was established at Basle, Switzerland, in 1901. As the competition of labor and capital was international, it had, in the opinion of many careful observers, become necessary to safeguard the interests of labor by international agreements. Consequently, we find that this international association receives subsidies from most European governments, and a small one from the United States through our federal

Department of Labor. And, in 1905, as we have already seen, an international treaty was entered into by Italy and France for the advancement of the interests of labor and for mutual protection of employers. Small indeed are these items, but they are significant as beginnings.

We must, however, analyze the public expenditures of the various departments more carefully to understand fully the order of development in the objects of public expenditures. The whole expenditure of the Department of Agriculture is an expenditure to promote material well-being, and this has become one of the great departments in modern government. The Department of the Interior is also largely concerned with expenditures to promote the general material welfare. We have in the Department of Agriculture such divisions as forestry, food adulteration, botany, seed tests, pomology, entomology, agricultural soils, irrigation investigations, and road inquiry.

We cannot lay down any hard and fast line between public and private expenditures, because there is a perpetual shifting from the satisfaction of wants privately to the satisfaction of wants publicly, and sometimes even, though less frequently, the reverse process. The railways of Prussia were once private, and their receipts and expenditures had little to do with the Prussian budget. Now the receipts are public receipts, and their expenditures are public expenditures. The addition to the budget, however, does not mean necessarily an additional burden on the people. Indeed, if the people are well served and served for a lower price than formerly, with less relative cost of operation, the burdens of the people have been lightened, and this is what is generally claimed in Prussia. Let us take the case of a city in which watering the streets is a private matter paid for by private subscription. The expenditure becomes a public expenditure when the city takes upon itself this function, but if the public expenditure is no greater than the private expenditure, there is no additional burden. If the service is better performed, and the total burden more fairly distributed by taxation than by private subscription, — as sometimes, at least, happens, — there is a positive gain. The increased density of population has been

mentioned as a cause of increased public expenditures. A suburb without any municipal organization may maintain electric lights in the streets by private subscription. The expenditure appears in no public budget. This suburb secures some kind of a municipal organization, and that which was a private expenditure becomes a public expenditure. Again, however, there is no increased burden resting upon the people; their wants are satisfied through a different channel.

When we compare modern times with ancient times, we find that an increasing proportion of the public expenditures are incurred for objects which directly benefit the people, and relatively a decreasing amount for objects in which they have comparatively little concern. This finds most striking exemplification in a comparison of the budget of France in 1789[1] with the budgets of 1906 and 1907, which we take merely as typical modern budgets.[1]

Expenses — 1789	Livres[2]
Cost of collection and reimbursements (does not include cost of collecting taxes farmed out)	31,478,000
Consolidated debt — included portion made up of annuities	162,486,000
Interest, etc., on remaining portion of debt	80,527,000
Pensions	29,560,000
Royal family and princes	33,240,000
Total	337,291,000

"This formed the total deduction before provision could be made for general service of the government," in which the various items are as shown in the accompanying table. It will be observed, in comparing these budgets, that the French court consumed a very large proportion of the expenditures of 1789; and that of what remained a very large proportion was consumed by the public debt, the army and navy; and that for education

[1] Necker's "Budget," May, 1789, rearranged by the author of the article in the *Dictionnaire des finances*.

[2] A livre is slightly — say 2 per cent — less than a franc.

and the promotion of general welfare the expenditure was relatively insignificant. A study of the table on the next page reveals one of the reasons why it is that France is able to sustain so large a public expenditure. Wants are thereby satisfied, and what is expended returns to the people in services.

Expenses — 1789 (*Continued*)	Livres
War	100,548,000
Marine and colonies	40,900,000
Foreign affairs	7,480,000
Justice	6,353,000
Interior	8,249,000
Financial administration	5,801,000
Public works, agriculture, and commerce	11,907,000
Public instruction and fine arts	1,227,000
Public worship	2,188,000
Total	184,653,000
Brought forward	337,291,000
Grand Total	521,944,000

The view here presented of public expenditures is undoubtedly one which is reassuring. The impression must not be gathered from this that there is no need for care and watchfulness. As public expenditures increase, it becomes of more and more importance to secure wise and prudent administration of all our resources. Wastefulness becomes more serious than ever before, and the benefits from excellence in administration increase correspondingly. Without pronouncing any opinion upon what is called imperialism, we may also say that the enormous increase in expenditures, in one way or another connected with war, which we have seen during the past few years, cannot be viewed without misgiving. Even if there is no danger of the bankruptcy of any great modern nation, the thought must at least occur to one that it is a pity that, with so many public needs unsatisfied, with such large possibilities in the way of improvement of educa-

BUDGET ESTIMATES VOTED FOR THE YEARS 1913 AND 1914

BRANCHES OF EXPENDITURE	1913 FRANCS	1914 FRANCS
Finance: public debt	1,286,423,922	1,306,585,021
President, Chamber, Senate	20,116,488	20,006,738
Finances	358,948,853	389,243,907
Justice	58,551,727	61,017,461
Foreign affairs	20,668,037	22,879,749
Interior	141,961,939	176,949,513
War	983,224,376	1,203,659,712
Marine	467,176,109	513,542,521
Merchant marine	91,394,631	97,368,267
Instruction	309,139,995	347,810,375
Fine arts	21,778,491	21,839,189
Commerce and industry	16,792,379	17,948,374
Labor, etc.	106,669,353	106,718,809
Posts and telegraphs	344,313,845	362,635,135
Colonies	105,535,393	109,724,180
Agriculture	55,002,741	74,769,222
Public works	340,905,255	358,944,912
Total	4,738,603,534	5,191,643,085

tion and of our general environment, such enormous and almost incomprehensible aggregates of wealth should be annually expended for warlike purposes.

Development of Public Expenditures with Respect to Regularity and Irregularity. — Public expenditures are regular and irregular, or ordinary and extraordinary, with respect to their occurrence. Whether the expenditures are regular or not depends upon the nature of the goods and services for which they are incurred. A large force must be employed in the army and navy and civil service; and regular expenditures must be made for these branches of the public service. On the other hand, there are great monumental works like the construction of a capitol for which the expenditure is irregular in character. War, famine, and pestilence occasion irregular expenditures. It is to be noticed, however, that in any scientific arrangement regular expenditures increase and irregular expenditures decrease. This

is particularly the case in a large country, and especially so when long periods of time are taken into account. It is an end to be striven for in the interest of orderly finance. In India there is a regular famine fund to make provision for the recurring famines, so that even expenditure of this kind takes on the character of regularity. The longer the period of time and the larger and richer the country, the greater the possibilities of establishing regularity, inasmuch as chance elements decrease under these circumstances. The construction of a post-office building in one city is an unusual event, but, when the United States as a whole is taken into account, it is quite possible to provide regularly for post office buildings.

It is further to be noticed that preventive measures rather than relief measures increase regular expenditures. This is one argument in favor of constant preparation for war. The war expenditures are smaller and less disturbing when they come. It need not be remarked that this financial advantage may be secured at a loss otherwise. Furthermore, there is a certain conflict of interests between administration and legislation. Those who are administratively responsible for expenditures prefer to have budgets voted for long periods, as in this way they can accomplish most with a given sum. On the other hand, a legislative branch of government desires that budgets should be voted for short periods for the sake of stricter control.

It is also to be noticed that the constitutional provisions against debts in the states of the American Union promote regular expenditures. Where loans are not possible, it is frequently necessary to spread expenditures over long periods in order that the burden may not be too great at any one time. This may happen in the construction of public buildings and of other important public works, certain sums being appropriated each year for a series of years.

Classification of Public Expenditures. — Many principles of classification have been adopted. At the bases of all of these, for countries like our own organized along federal lines, is the distinction among (1) central, (2) intermediate, and (3) local units. In the United States the central would be the federal, the inter-

mediate would be the separate states, and the others, the local. An examination of expenditures with respect to these units throws a good deal of light upon our general political evolution. It especially helps us to determine whether or not there is a tendency in the direction of centralization, although expenditures are not conclusive evidence. Fear is often expressed lest the central governments should expand at the expense of local governments. It is thought by some that we are living in a period of centralization. Statistics of public expenditure do not bear this out. From the close of the Civil War until the end of the nineteenth century, local expenditures increased most rapidly and state expenditures least rapidly. Between 1903 and 1913, however, the expenditures (" governmental cost payments ") of the states increased 106 per cent, while those of incorporated places with 8000 or more inhabitants increased only 103 per cent, and those of the federal government only 54 per cent. The increase in state expenditures seems to have been due to general expansion and multiplication of state activities, although it was particularly marked by the development of state highways and costly internal improvements such as the new canal system in New York, by more generous appropriations for education, and by the multiplication of state commissions.[1]

The student, and even the general reader, will find it especially instructive to study the financial reports of the federal government and of our states and cities, and arrange the items of expenditures under various general heads.

[1] It is exceedingly difficult to arrange a classification that will be at once practical and scientific, *i.e.* that will show the expenditures of governmental departments as they are actually organized, observe the necessary accounting distinctions, and answer scientific inquiries of major importance. For American classifications which most nearly meet all the requirements, see the financial publications of the Bureau of the Census; the reports of the Comptroller of the State of New York; the Massachusetts reports entitled *Statistics of Municipal Finances;* and, for the federal government, the reports of the President's Commission on Economy and Efficiency, and in particular a paper by Harvey S. Chase, C.P.A., dealing with the expenditure side of the national budget, in the *American Economic Review*, Volume v, No. 1, Supplement, pp. 186–195. A suggestive classification adapted to European conditions will be found in Cossa's *Taxation: Its Principles and Methods*, Part ii, Chapter iii. The summary census classification printed on the following page covers all governmental subdivisions in the United States, except townships and incorporated places having less than 2500 inhabitants.

EXPENDITURES AND PAYMENTS OF THE NATIONAL GOVERNMENT, STATES, COUNTIES, AND INCORPORATED PLACES HAVING A POPULATION OF 2500 AND OVER: 1913

SUBJECT	AGGREGATE		NATIONAL GOVERNMENT		STATES		COUNTIES		INCORPORATED PLACES	
	Total	Per Capita	Total	Per Capita	Total	Per Capita	Total	Per Capita	Total	Per Capita
Governmental cost payments	$2,966,992,825	$30.56	$952,600,857	$9.81	$382,551,199	$3.95	$385,181,760	$4.49	$1,246,659,009	$27.29
All general departments	1,859,633,992	19.15	598,857,357	6.17	316,500,666	3.27	277,735,319	3.24	666,540,650	14.59
General Government	273,555,786	2.82	61,783,733	0.64	40,495,879	0.42	102,334,964	1.19	68,941,210	1.50
Protection to person and property	445,648,157	4.59	264,670,696	2.73	25,066,253	0.26	15,213,229	0.18	140,697,979	3.08
Conservation of health and sanitation	75,326,813	0.78	5,700,620	0.06	6,388,114	0.07	2,815,466	0.03	60,422,613	1.32
Highways	202,221,041	2.08	42,651,775	0.44	16,884,385	0.17	55,514,891	0.65	87,169,990	1.91
Charities, hospitals, and corrections	340,610,995	3.51	182,313,240	1.88	87,585,903	0.90	37,815,508	0.44	32,896,344	0.72
Education	441,659,413	4.55	17,242,816	0.18	133,463,181	1.38	58,046,905	0.68	232,906,511	5.10
Schools	430,837,123	4.44	16,683,560	0.17	132,575,106	1.37	57,682,193	0.67	223,896,264	4.90
Libraries	10,822,290	0.11	559,256	0.01	888,075	0.01	364,712	(1)	9,010,247	0.20
Recreation	24,763,789	0.26	923,801	0.01	1,982,682	0.02	419,556	(1)	21,437,750	0.47
Miscellaneous	55,847,998	0.58	23,570,676	0.24	4,034,269	0.05	5,574,800	0.07	22,068,253	0.48
Expenses of public service enterprises	331,951,186	3.42	264,106,982	2.72	3,460,620	0.04	189,122	(1)	64,194,462	1.41
Interest	189,104,184	1.95	25,256,180	0.26	14,156,235	0.15	17,417,593	0.20	132,274,176	2.90
Outlays	586,303,463	6.04	64,380,338	0.66	48,433,678	0.50	89,839,726	1.05	383,649,721	8.40

SUBJECT	AGGREGATE	NATIONAL GOVERNMENT	STATES	COUNTIES	INCORPORATED PLACES
Nongovernmental	$2,559,568,548	$1,045,271,792	$124,296,741	$497,223,413	$892,776,602
For purchase of investment and supplies	186,836,556	—	37,725,717	5,106,811	144,004,028
For redemption of debt obligations	1,643,519,003	1,011,251,811	36,495,682	58,965,207	536,806,303
In trust and agency transactions	542,042,937	20,589,999	25,106,555	422,226,435	74,119,948
In counterbalancing transactions	27,788,002	13,429,982	1,422,227	3,136,937	9,798,856
By general transfers	159,382,050		23,546,560	7,788,023	128,047,467

[1] Less than one half of 1 per cent.

If access can be had to reports covering a considerable number of years and different countries, it will be found that an examination of them will throw an immense amount of light upon the nature of modern civilization and its direction.

It is also instructive to compare expenditures *on account of the head of the State* in various countries, and particularly to contrast monarchical and republican countries. It is important to discover great historical tendencies, and to contrast different periods of time, especially as regards monarchical expenditures. It is beyond all question that relatively, in the civilized world, that is an item of declining importance. At the present time, the king of a great country like Prussia or England supports a magnificence of state which is altogether out of keeping with the ideas of a democracy or a republic. Four or five millions of dollars per annum for a modern monarch is not a large expenditure. On the other hand, in contrast, the expenditures of the President of the United States (including those connected with the executive mansion, contingent expenses of all sorts, and presidential clerks) amount roughly to $150,000. However, as regards the expenditures of a modern monarch (the German Emperor, for example), a detailed examination shows that custom and tradition, as well as the will of the monarch, cause a large part of his income to go for public purposes, and that his wealth has been largely socialized. The king is no longer the typical rich man.

On the other hand, the expenditures on account of the American Congress are unprecedented in amount among the expenditures incurred *on account of legislative bodies*. The world has never seen anything of the kind before, and nothing parallel to it can be found in any other country. Among other things, this goes to indicate, as contrasted with Germany, the great importance of the legislative body which is supposed to represent the people directly and immediately and to carry out their will. In aristocratic countries the legislative office is sometimes an unpaid office. This was until recently the case in British and German parliaments, the idea being to favor wealth and to counteract democratic tendencies — an aim which was not accomplished. A democracy, however, is more likely to insist upon a legislative office being a paid office; and, in some of the German states, although the payment is small, its acceptance is compulsory.

Expenditures incurred in the *administration of foreign affairs* are of increasing importance on account of growing economic internationalism. We would here have two main classes; namely, (1) expenditures on account of diplomacy, those representing the purely political side of government, and (2) expenditures on account of the consular service, representing the business interests of the country. Expenditures connected with boundaries and surveys are expenses which would come under this general heading.

With regard to the administration of foreign affairs, any one nation is limited in what it can do by international customs. We Americans, for example, cannot force our ideas on other nations. Certain standards of

dignity and propriety have been established with respect to the mode of life for diplomats, and, if we depart from these, we do so at a loss which every diplomat in the service of the United States keenly feels. The most that we can do is to exercise pressure in what we believe to be the right direction, and that is the direction of democratic simplicity.

When we examine expenses incurred in the *administration of justice*, we notice a large increase with the growth of democracy. In earlier times in countries like England and Germany, the administration of justice was to a greater or less extent "patrimonial," being connected with certain estates. The duty of administering justice went with the great estate or manor and involved little expense. As people take things into their own hands they must pay their own expenses. Democracy, in its progress, means large public expenditures.

The new humanitarianism of the age, which, in a way, is one expression of democracy, involves large expenditures, as seen in education, modern reformatories, etc. But it is believed by the advocates of humanitarianism and democracy that these expenditures are worth while.

It is when we come to expenses incurred in the *promotion of the general welfare* that we see the most remarkable and encouraging phenomena that greet us in the treatment of public expenditures. This has been seen in the data already given, and will become increasingly manifest as the student carries on his statistical studies in this field.

QUESTIONS

1. Define public finance. Why should it be regarded as a part of economics? Can you give any reasons why it should be regarded as a separate science?

2. Can we spare money for taxes only when we have an income affording a surplus over and above necessities? If the money paid for taxes is used to provide us with necessities, is there any good ground for the doctrine that an income sufficient to afford a minimum of subsistence should be exempted from taxation in the case of an income tax?

3. What various meanings do you ascribe to the enormous increase in public expenditures during the nineteenth century?

4. What should be the consequences if the government of the state in which you live should strive for the largest possible amount of revenue, and then govern its expenditures so as to consume the entire state income?

5. Discuss the differences between public expenditures and the expenditures of a private household. Would you regard it wise on your part to make any expenditures with the idea that a benefit to some one would accrue one hundred years later? fifty years later? twenty years later?

6. What considerations must govern us when we attempt to answer the question, "What is the proper proportion between public expenditures and the total income of society?"

7. Discuss Wagner's rule. Is the fact that public ownership increases the permissible proportion of social income that may be used for public purposes an argument for public ownership of railways? If so, why? If not, why not?

8. Discuss economy, parsimony, frugality, extravagance in public expenditures, and give as full illustrations of each as you are able (*a*) from your own observation, (*b*) from your reading and conversation and correspondence with others, public officials included.

9. Discuss the historical order in which items of expenditure appear in national, state, and local governments. Give illustrations from the state and from the local political unit in which you live. Give any illustration which may occur to you of taxation which lightens the burdens of the taxpayer.

10. If you were permanent Secretary of War, would you desire to know for a long number of years in advance the yearly sums that could be expended on the army? Could you thus make the same amount of money accomplish more than if dependent upon annual grants uncertain in amount? What would be your view as a member of Congress? Is a state university to be controlled in its expenditures by the legislature as rigidly as Congress should control the administration of the army? If so, why? If not, why not? Would you make any distinction in this respect between the army and the navy?

11. Present such statistics as you may be able to gather showing relatively and for as long a time as possible the increases in public expenditures in the federal government, in your own state, and in your own local political unit (city, county, town, etc.), and give all the evidence that you can secure showing the significance of the movement.

REFERENCES

Government publications generally.

As illustrative particularly of the expansion of government expenditures and public work, the *Year Book* of the Department of Agriculture.

For growth of militarism, take publications of the Department of War and publications of similar departments in other countries.

For general statistical data, the *Statesman's Year Book* is as reliable as anything in English. For our own country, see annual *Finance Report* of the Secretary of the Treasury, and census reports, especially the reports on *Wealth, Debt, and Taxation*. For making a broad survey of the federal expenditures of the United States, perhaps no single publication is more useful than the annual *Letter from the Secretary of the Treasury transmitting Estimates of Appropriations*. A striking exhibit of the growth of federal expenditures will be found in Senate Document No. 528, 60th Congress, 1st Session, entitled *Expenditures of the United States Government*, 1791–1907.

CHAPTER XXXII

PUBLIC RECEIPTS FROM LOANS AND GOVERNMENT OWNERSHIP

Public Debts. — The modern State follows a policy of deficit financiering. The great and increasing expenditures, which have been described in the preceding chapter, entail burdens too heavy to be borne, at least in the first instance, by taxation alone, and recourse must constantly be had to the public credit. Even before the European War, about one fourth of the annual revenue of England was used in the payment of debt or interest upon debt; and, as is shown in the French budgets given on page 659, more than one fourth of the total expenditures of France was devoted to the same purpose.

In the last half of the nineteenth century, the aggregate public debt of the civilized world increased enormously. According to the best estimates, the indebtedness of the *national governments* of the world, which amounted to $7,627,700,000 in 1848, had risen to $27,525,000,000 in 1890, and since that time it has greatly increased. Figures showing the total and *per capita* debt of all governmental divisions of this country are given in Table I. From this statement it appears that between 1902 and 1913 the aggregate public debt of this country increased by over $2,000,000,000, the greater part of the increase being ascribable to the astonishing growth of municipal and local indebtedness, which increased by 113 per cent in the interval. It is true that the total public debt is less than it was in 1870, that the *per capita* debt has fallen from $82.99 in 1870 to $49.97 in 1913, and that according to Census estimates of national wealth (not very trustworthy), the public debt covered only $2.58 of each one hundred dollars of national wealth in 1912, as against $2.85 in 1902, $3.06 in 1890, $6.97 in 1880, and $10.64 in 1870.

But this diminution of the aggregate debt is due to the extraordinary progress which our tariff surpluses have enabled us to make in reducing the debt contracted during the Civil War; and the normal movement in the long run is probably toward an increase of the public debt, at least absolutely and *per capita*, if not in proportion to the national wealth.[1]

TABLE I

PUBLIC DEBT OF THE UNITED STATES

(Debt less sinking fund assets)

	TOTAL IN MILLIONS OF DOLLARS					PER CAPITA				
	1913	1902	1890	1880	1870	1913	1902	1890	1880	1870
Total	$4850	$2839	$1989	$3043	$3200	$49.97	$35.99	$31.76	$60.66	$82.99
National gov't .	1029	969	852	1919	2331	10.59	12.22	13.60	38.27	60.46
States	346	239	211	275	353	3.57	3.03	3.37	5.48	9.15
Minor divisions	3476	1630	926	849	516	35.81	20.74	14.79	16.91	13.38

The great increase of public debts is due principally to two causes, wars and public works. The former are misfortunes, losses, however the result is expressed. The loss comes, not in contracting a debt, but in spending and destroying the property consumed by war. This loss cannot be postponed by a debt, although one nation may postpone part of the loss by borrowing goods and supplies from the people of another nation. It comes out of wealth existing or produced at the time, no matter what arrangement is made. In former times each man bore the loss as it happened to fall on him. The modern method differs in just this, that the loss is transferred to the whole public. This, again, may be done in two ways. A tax may be levied at the time sufficient to pay all expenses, or a debt may

[1] According to Census estimates, the *per capita* debt of the United Kingdom in 1904–1905 was 3.93, that of France 4.86, and that of Italy 2.25 times as great as the *per capita* debt of the United States in 1902, while that of Sweden was a trifle less than the *per capita* debt of the United States.

be incurred and the necessary taxation spread over a longer period of time. In practice the latter proves far the best, for at least a part of the expenses. It gives taxpayers time to adjust themselves to the extraordinary demands. A war debt is, therefore, not a misfortune, though it stands for a previous misfortune — war.

The case is clearer when we consider debts contracted for public works. Under this head we include primarily productive enterprises like railways, canals, forests, gas works. These, when purchased or constructed by the government, are the occasion of debts, sometimes enormous in amount. It might seem possible to pay for them by immediate and heavy taxation, since no more is taken out of the people than when the money is borrowed. But the national wealth is not like an ocean, alike in all its parts and instantly filling up where water is dipped out. It makes all the difference in the world where you dip. Here are men who have funds invested in a productive business; here are others who have funds lying idle. The State decides to make a public investment, and calls for money. If it collects it by an immediate and heavy tax, the first class have a part of their ordinary earnings withdrawn, and their business is crippled or ruined. The others have some of their funds withdrawn, but the most still lies idle. The best that can be done in such a case is for the first class to borrow of the second, which only makes private debts instead of public ones — a much more burdensome condition of things for the national industry. The wiser modern method is for the State to borrow the unemployed funds and leave industrial operations intact, then imposing a moderate tax which can be paid out of annual income. If the expenditure in question is an investment, it presumably pays for itself in time without requiring taxation.

This brings us to the relation between taxes and debts. Taxes should never be so heavy that they cannot be paid easily out of annual income. If they trench upon national savings, they derange private industries disastrously because they are imposed upon all without regard to the nature of their investments. But while taxes cannot safely exceed the national disposable

surplus for each year, it does not follow that the State may not take savings as well as surplus for its undertakings; only these savings must be taken from those who have *uninvested* savings. This cannot be done by any method of general contribution like taxation. It can only be done by public loans. Whether the loan is a wise thing or not depends altogether on the nature of the State's investment. If the State takes these savings ever so wisely and wastes it, the people have lost just so much capital. If, on the other hand, the State takes savings which were uninvested and therefore unproductive, and invests them in a profitable undertaking, the net result to society is an additional profit. Public debts are no indication of national poverty. Whether a nation is growing poorer or richer depends not on its indebtedness, but on its production relatively to its consumption. Public debts are not a good thing in and of themselves, but they have incidental advantages which offset some of their disadvantages.

Having noticed the natural limits of both taxation and borrowing, we have now to ask, What kind of expenditures should be provided for by each? In general the answer is easy, though details are troublesome at times. Ordinary expenditures, that is, those which recur with sufficient regularity so that they can be foreseen and estimated in advance, if not provided for by receipts from d mains and industries, should be met by taxation. If the State cannot do this, it is a confession that ordinary expenditures are in excess of the disposable surplus income of the nation, a state of things which means bankruptcy if continued long enough.

Extraordinary expenditures, caused by national calamities, such as floods or war, and public investments — railways, city gas works, etc. — may be met by loans. The function of loans thus becomes a double one: first, the distribution of unavoidable losses, so that industry is as little disturbed as possible; and second, the investment of uninvested capital in productive public enterprises.

In the creation and management of public debt it is peculiarly necessary to observe the golden mean and avoid both

improvidence and unwise restrictions. Obviously, temporary deficits resulting from a failure of current revenue to meet current expenses, should not be allowed to accumulate and then be funded as a permanent debt. This is a vice of boss-ridden government which goes far to explain the rapid growth of American municipal indebtedness in the last half of the nineteenth century. Similarly, in our opinion, debt should not be contracted in order to erect public schools or other durable improvements which, although capable of rendering service through a long period of years, produce no money revenue and represent from the fiscal standpoint continuing liabilities rather than durable assets. It must be admitted that authorities differ on this point; but even among those who sanction the contracting of debt to pay for durable improvements which are financially non-productive, it is agreed that in any event the life of the debt should not exceed the life of the improvement in question. Long-time bonds, for instance, should not be employed to resurface roads and pay for highway improvements which will last only a few years. Finally, in our opinion, restriction may be properly imposed upon public indebtedness contracted for purposes which are fiscally nonproductive, although such restrictions should limit the increase of indebtedness and, for reasons which have been stated on page 653, should not be expressed as a percentage of the assessed valuation of taxable property.

On the other hand, few, if any, restrictions should be placed upon borrowing for the purpose of acquiring income-yielding property. Such restrictions place states and cities at a disadvantage as compared with private corporations. They also ope ate to throw into the hands of private corporations enterprises which cannot be paid for out of one year's revenue, and yet might advantageously be acquired by the public. At the present time excessive limitations, unworthy of a free people, make it impossible for some cities to carry out necessary public improvements which would not impose the slightest real burden upon taxpayers. In Chicago, several years ago, after a prolonged and exceedingly expensive campaign for the improvement of the street car service, the city was prevented from carry-

ing out a carefully devised plan of reform by a court decision which held that an issue of street railway certificates would increase the indebtedness of the city beyond the limits prescribed by the constitution. Rigid limitations which prevent municipalities from offsetting part of their debt by the value of waterworks, lighting plants, and other assets which yield a monetary return, have no place in a scientific system of public finance.

While not absolutely required by theory, it is probably desirable as a matter of practical political psychology to make provision for the extinction of all public debts within a period, say, of sixty years. It has been customary in the past to do this by means of sinking funds, but experience has shown that the sinking fund is a cumbersome, wasteful, and unscientific method of accomplishing the desired end. Bonds which automatically mature in recurring installments offer a much better device for the retirement of public debts. The serial bond, as such an obligation is called, "can usually be placed at a lower rate of interest than a sinking fund obligation. It is free from most of the possibilities of political abuse and manipulation to which sinking funds are exposed. It substitutes a plain and certain for an uncertain or complicated liability; and it compels the administration which contracted the debt to begin its retirement immediately."[1]

The Public Domain. — By domains we usually mean agricultural and mineral land and forests owned by the State and managed in the interest of the public revenue, although we might logically subsume under the term the streets and other public property of cities, with all the valuable franchises and privileges which go with them. The direct revenue from this source in the United States is not large, and if account be taken of the cost of the public domain and the expense which it has entailed, the net earnings would possibly be a minus quantity.

Until a comparatively recent date this was not the case. In early feudal times the king had large estates of his own from the produce of which the government was largely supported,

[1] Report of the Committee on Increase of Public Expenditures, *Proceedings of the National Tax Association*, vol. ix, p. 465.

and although he had certain military rights over his subjects, he had very limited rights over their property. Later, the king became a public rather than a private person, and a large part of the crown estate became the property of the public; but even then taxation was relatively unimportant, and the State relied principally in times of peace upon fines, escheats, fees, crown prerogatives (certain dues which the king was entitled to collect as of his own right), and upon the proceeds of the public domain. Blackstone, the great English jurist, writing in 1765, classified taxation among the "extraordinary" revenues of the sovereign; and in some of the German principalities the government was enabled to get along without taxation in times of peace, down to the close of the eighteenth century. Real democracy not yet having been achieved, the people distrusted taxation and resented its imposition, while the sovereign wisely clung to that species of revenue which was independent of the people's caprice. "The public domains," said Bodin, the great political philosopher of France in the latter part of the sixteenth century, "should be holy, sacred, and inalienable either by grant or by prescription."

But as democracy developed and the representatives of the people gained control of the finances, a new policy was everywhere adopted. If State management was uneconomical and wasteful, and if the government could obtain all the revenue needed by taxation, why preserve the wasteful methods of management? Why not turn public property into private property, to be developed and multiplied through the vitalizing force of individual self-interest? *The great truth was realized that the property of individuals, when subject to taxation and regulation, is no less part of the great patrimony of the State than those lands and forests whose title is retained by the government itself.* This doctrine was generally accepted by the greater countries of the world during the eighteenth century, so that Adam Smith, in defending it in 1776, was able to write that "there is not at present, in Europe, any civilized state of any kind which derives the greater part of its public revenue from the rent of lands which are the property of the state." This

philosophy was dominant when our national government was created in 1789, and has guided our national policy ever since.

Land Policy of the United States. — By exploration and occupancy, war, and various cessions, the federal government acquired, after the Revolutionary War, a magnificent domain of 2,252,244 square miles. Now, while we have consistently followed the doctrine of alienation until very recent years, trying, apparently, to get rid of the public domain as rapidly as possible, one observes historically a very important change in the manner of development. In the early years of the Republic, large revenues were expected from the sale of public lands; it was the financial side which, according to Alexander Hamilton, claimed "primary attention." [1] Until about 1800, the policy was to sell the land in large blocks, even though it went to speculators; this was followed by an attempt to sell small holdings to actual settlers, the credit system being used with disastrous results; later (1830), the preëmption policy was introduced by which *bona fide* home makers were given certain advantages in purchase; and finally came the Homestead Act of 1862, the Timber Culture Act of 1873 (now repealed), and the other less important laws by which actual settlers can obtain homes practically free of cost. From the very beginning we have used our public lands as bounties, to hasten the development of the country; and this policy has been carried out by enormous grants of land for the endowment of education and the subsidization of canal, railway, and other internal improvement companies. Our original aim, however, was not only to develop the country as rapidly as possible, but to secure as much revenue as possible from the sale of public lands. We still aim to develop the country, but the idea of profit has been replaced by the policy of giving land to the landless. To exaggerate the evolution of policy for the sake of emphasis, it may be said that we began with a productive policy, and modified it with a distributive policy; that in the beginning our object was the greatest good, while now it is the greatest good to the greatest number, or, in terms more appropriate to the exact case in hand,

[1] Quoted by Donaldson, *The Public Domain*, p. 198.

the greatest possible use of the public domain consistent with widespread participation in that use.

Forest Lands. — The policy of alienation, while on the whole sound, is subject to certain limitations which it is very important to note. First of these is the case of forests. The ruthless denudation of our timber lands, the striking advance in the price of lumber indicating that the supply has not kept pace with the demand, and the meteoric development and rapid decline of the lumber industry in many localities of the Northwest, all combine to demonstrate that alienation and private ownership have failed to produce that careful industrial management which conduces to the greatest use and the greatest good in the long run. More important still, we have come to realize that the most productive use of other great natural resources has not been subserved by the private ownership of the forests. The regular flow of streams, the success of the great irrigation works which we are building, and the proper development of our mines, all depend more or less upon the permanent preservation of our forests; but private ownership and management in the past has led to destruction, not preservation.

The United States awoke very slowly to these truths. Prussia abandoned the policy of disposing of forest lands in 1831. France and Austria began to increase their forest holdings about 1870. But in the United States it was not until 1876 that an awakened interest showed itself in a congressional appropriation of two thousand dollars for the purpose of employing "a competent man to investigate timber conditions in the United States." In 1881 a Division of Forestry was created in the Department of Agriculture. This expanded into the Bureau of Forestry in 1901, and into the Forest Service in 1905. In 1891 a forward step was taken by the passage of an act authorizing the President to establish forest reserves; and in the same year the first forest reserve was established. In March, 1915, the area of the national forest reserves had increased to 184,611,596 acres (of which 21,337,533 were privately owned); the forest service had developed to a point where it was able to care for the management of this vast national industry, and to

coöperate further with private owners in establishing the principles of scientific forestry, while the policy of alienation has been modified to an extent amounting almost to reversal. Instead of selling forests, the government is now permitting timber to be cut in a way to preserve the forests. The revenue from this source at the present time is nearly $2,500,000, but that is a secondary consideration. The important point is that the government has demonstrated its ability to manage the forests along lines at once scientific and commercial. In many European countries, however, a greater revenue is secured from the forests. In France, for example, the public forests cover nearly 18 per cent of the entire land surface of the country, and yield approximately, it is reported, $2.50 per acre annually, — giving a revenue of about $59,000,000 a year. In the United States at present 35 per cent of what is received, according to law, goes to the states and territories in which the reserves are situated for public roads and schools. It is estimated that in a few years the reserves will yield not less than $5,000,000 a year.

Experience seems to show that the public ownership and management of forests is more efficient than private ownership and management. This is due to the length of time required to realize upon investments in this industry, its routine character, the large area one man can supervise, and, perhaps chiefly, to the fact that the government in its management takes into account the interests of the community as a whole. Although private corporations may make plans for a long period of time, they are less desirable owners and managers, especially in the last particular. The property tax, as now levied, is one of the greatest enemies of rational forestry by private owners. If an owner is forced to pay ordinary property taxes upon a standing or growing forest year after year, the pressure to cut the timber is almost irresistible. The State spends millions of dollars to preserve the forests, and yet often enforces a tax that puts a premium upon their destruction.

Mineral Lands. — Our experience with timber lands is important as showing that private ownership of some kinds of land has not resulted in the greatest or wisest use of that land.

Our experience with mineral lands demonstrates that the policy of disposing of public lands in small holdings, free of cost or at prices far below their real value, has not led to a widespread participation in the use and profit of those lands. The reason for this, broadly speaking, is that our policy of alienation in small holdings conflicts with the requirements and necessities of modern industry. In disposing of our lands we have tried to balk the corporation and the speculator in order to subsidize the settler and home builder. For instance, we have made the recipients of homesteads and mineral claims swear that they are not acting as agents "*for any person, corporation, or syndicate*," or "in collusion with any person, corporation, or syndicate, to give them the benefit of the land entered," and that the land is not being secured "for the purpose of speculation." Yet for purposes of grazing and in less degree for mining and lumbering, modern industrial methods require that large tracts of land shall be worked together, and that individual claims shall be consolidated. The core of the difficulty was well described by Mr. Roosevelt, when President, in these words: "It is a scandal to maintain laws which sound well but which make fraud the key without which great natural resources must remain closed. The law should give individuals and corporations, under proper government regulation and control, the right to work bodies of coal lands large enough for profitable development." And he thereafter recommended laws to authorize the leasing, instead of the complete alienation, of coal, oil, and gas rights, as well as grazing rights on the public domain. Already the royalty has been adopted by some of the state governments, and has been employed in a few of the permits issued by the federal departments of Agriculture and the Interior.[1] In a few decades, these leases will probably yield handsome revenues in some of the western states which have adopted them. As time passes the federal government exercises more freely its powers of reserving mineral rights in lands granted to "home-

[1] *Cf.* the conditions of the interesting permit issued in favor of the International Power and Manufacturing Company, and published as Senate Document No. 147, 63d Cong., 1st Sess.

steaders" or municipalities, and of withdrawing from entry valuable mineral deposits such as the potash beds of California. Year by year, therefore, the policy of complete alienation is more and more restricted.

The Success of our Land Policy. — In a rough, general way, our land policy has been a success, as is shown by the unprecedented and almost feverish development of the country in the last century, with the creation of a fund of taxable values which makes it an easy matter for the state governments to raise all the revenue which they need. But in some respects it has signally failed. In the first place it has not paid: more money has been spent for the purchase, survey, and care of the public lands than has been received from their sale and lease. In the second place, certain kinds of lands, as we have shown, should not have been alienated. And in the third place, our efforts to give land to the landless have bred an immense amount of corruption, fostered speculation, endowed private monopoly with public wealth, and pauperized whole communities. One has only to recall the convictions of public officers for land frauds, and to read the report of the Public Lands Commission — to which specific reference is given at the end of the chapter — to appreciate the truth of all these charges. The desert land law and the commutation clause of the Homestead Act, they tell us, operate far too often "to bring about land monopoly rather than to multiply small holdings by actual settlers." . . . "In many localities, and perhaps in general, a larger proportion of the public land is passing into the hands of speculators and corporations than into those of actual settlers who are making homes." . . . "Nearly everywhere the large landowner has succeeded in monopolizing the best tracts, whether of timber or of agricultural land." . . . "Your commission has had inquiries made as to how a number of estates, selected haphazard, have been acquired. Almost without exception, collusion or evasion of the letter and spirit of the land laws was involved." . . . "The fundamental fact that characterizes the present situation is this: that the number of patents issued is increasing out of all proportion to the number of new homes."

Possibly the most important lesson to be derived from the history of our landed domain is the vital truth that the government cannot give away valuable lands or sell them at prices far below their real value without subsidizing the speculator, endowing monopoly, and pauperizing the people. The poorer classes derive no real benefit from this indiscriminate public charity. As Secretary of the Interior Hitchcock said in 1905, in discussing the Timber and Stone Act:[1] "Many transfers of land patented under this law are made immediately upon completion of title to individuals and companies. In this way a monopoly of the timber supplies of the public-land states is being created by systematic collusion. . . . It has been urged in behalf of this act that it enables poor men to enjoy the bounty of the government by obtaining tracts of land which they can afterwards sell with advantage. A careful study seems to show, on the contrary, that the original entrymen rarely realize more than ordinary wages for the time spent in making the entry and completing the transfer. The corporations which ultimately secure title usually absorb by far the greater part of the profit." When Uncle Sam was rich enough — or was supposed to be rich enough — to provide us all with a farm, the policy of giving away the public domain appeared to be in harmony with the principle of equality of opportunity. But when the supply is far below the demand, those who receive gifts by lot or similar methods are in receipt of special privileges. What once seemed fair has, in the course of economic evolution, become unfair and demoralizing.

Our conclusion may be formulated in the following general rule: Only those lands should be wholly alienated whose use and development under private ownership lead neither to monopoly nor to exhaustion and waste. Or, in more concrete terms (remembering that the maxim applies only to those lands left to the government, and to the majority of cases, not to every specific case), the rule for agricultural lands should be private ownership and management, for forest lands State ownership and management, for mining and grazing lands State ownership

[1] *Report of the Secretary of the Interior*, 1905, p. 331.

and private management under a lease or royalty system, by which the State shall secure a share of the profits and retain a large amount of regulation and control. In disposing of its lands the government should endeavor to charge value received, as gifts of valuable land, or sales at inelastic schedules of prices which place an extreme valuation upon some tracts and an utterly inadequate valuation upon others, lead to speculation and monopoly, having most of the demoralizing features of a public lottery in which the prizes are distributed partly by chance and partly in accordance with the cunning, chicanery, and unscrupulousness of the participators. Under existing conditions the poorer classes of society get almost none of the valuable lands. Charge value received, and the people, the masses, get their share in the revenues flowing to the public treasury, in reduced taxes, and more generous expenditures for educational, protective, and developmental purposes.

Land Nationalization and Municipalization. — In recent years both state and national legislation have shown a decided trend toward the adoption of methods which will yield both greater revenue and greater control of those varied forms of national wealth which we collectively designate "land." The object of this legislation is to prevent monopoly and give to society a share in the land values created by social growth. One of the most ingenious plans for securing this end ever proposed is the single-tax scheme defended with great eloquence and earnestness by the late Henry George. His scheme, usually called "the single tax," is stated thus in his own words, printed in his organ, *The Standard:*

"*The Standard* advocates the abolition of all taxes upon industry and the products of industry, and the taking, by taxation upon land values, irrespective of improvements, of the annual rental value of all those various forms of natural opportunities embraced under the general term 'land.'

"We hold that to tax labor or its products is to discourage industry. We hold that to tax land values to their full amount will render it impossible for any man to exact from others a price for the privilege of using those bounties of nature in which all living men have an equal right of use; that it will compel every individual controlling natural opportunities to utilize them by employment of labor or abandon them to others; that it will thus

provide opportunities of work for all men and secure to each the full reward of his labor; and that as a result involuntary poverty will be abolished, and the greed, intemperance, and vice that spring from poverty and the dread of poverty will be swept away."

Mr. George's proposition rests upon an extreme application of the doctrines of individualism and natural rights. Man, he holds, has an inalienable and equal right to live, and consequently an inalienable and equal right to those natural agents which we call land, and without which human life cannot exist. This right which attaches to the individual cannot be abrogated by law or custom, nor can it be alienated by one generation or set of law givers. Moreover, it is an equal right. A, B, and C each have a right to the soil, but A has no right to better soil than B or C; in consequence of which that part of land values which arises from the differential qualities of land belongs to society as a whole, and not to particular individuals. But the differential value of land expresses itself in the economic rent which it yields, and consequently, if society seizes this rent by taxation, it will satisfy the demands of the doctrine of natural rights, while leaving the actual management and exploitation of land in the hands of individual occupiers, thus avoiding the perils of direct public management.

Man also has an unalienable right, Mr. George held, to the fruits of his own labor. As the outcome of this right, Mr. George concluded that ordinary taxation upon property other than land, upon the product of labor as distinguished from land, the gift of God, is robbery. In his view it is as immoral to levy an ordinary tax as it is criminal to fail to tax that surplus which attaches to the better classes of lands, and which we call economic rent.

The policy embodied in Mr. George's scheme differs fundamentally from the policy which we have seen creeping into recent legislation. The latter purposes to reserve only a part of the value given to some forms of land by social development. Mr. George proposes to confiscate all of the "unearned increment." Most important of all, the former proposition applies only to the future unearned increment, and purposes only to take a part,

and that only after fair notice is given. Mr. George proposes to take all the unearned increment, past and present, and that whether the present owners have been encouraged to believe that they might be permitted to appropriate the whole unearned increment or not. Herein lies the essential injustice of Mr. George's scheme. As a nation we have induced immigrants and settlers to take up lands, clear them, and develop them with their labor and toil, with the promise that the values thus created by themselves and their neighbors should belong to them. Their risks and their sacrifices have been great. The " unearned increment " is not always unearned. Even if we assume that the State made a mistake in pursuing this policy, the results of the mistake must be cheerfully borne by the party at fault, the State itself. This of course does not mean that the private ownership of land is socially harmful, it must nevertheless be perpetuated. It does mean, however, that if the state is to divest private owners, it must in equity compensate them.

Mr. George not only proposes to confiscate all economic rent without compensation, and to abolish all other forms of taxation, but the assertion is made in explanation and justification of the policy that it will abolish poverty. Such a policy might, indeed, prevent landowners, who do not care to use their land, from keeping it out of the hands of those who would use it; but how it would effect all the other predicted blessings is difficult for most people to comprehend. In the first place, it is difficult to imagine how the pure economic rent of *agricultural* land can be separated in practice from the annual value of separable improvements on the land. But apart from this difficulty, the appropriation of economic rent by the public without compensation to the owners will probably never appeal to the conscience of the American public as a just thing to do. No abstract reasoning, based on " natural rights," will persuade a modern nation to so radical a step. This honestly and earnestly advocated policy is only one more illustration of the danger of basing social reasoning on any theory of " natural rights."

In cities it is easier to separate the pure economic rent from the earnings of improvements, such as buildings. Moreover, it

is in cities that the principal evils attendant on private land-holding are discoverable. Therefore the objections to land *nationalization* do not in the same degree apply to land *municipalization*. Many who will reject the one will favor the other. Even here, however, it is well to proceed very cautiously. Confiscation, at any rate, should not be tolerated. If great and expensive changes along this line should approve themselves to the people, the burden of the changes should be widely diffused throughout the community by means of inheritance and other taxes.[1]

Public Industries. — In the beginning, let us briefly pass in review the principal classes of industrial enterprise in which the modern State engages for the satisfaction of other than State wants; because, obviously, we are not concerned with enterprises like the government printing office, the government navy yards, and in general, those incidental industries whose products the government consumes but does not regularly sell.

1. First, we find states like Switzerland monopolizing the manufacture of alcohol and certain alcoholic beverages, Japan monopolizing the opium traffic in Formosa, or commonwealths like South Carolina engaging at one time in the retail distribution of intoxicating beverages. The purpose of the State in engaging in such industries is primarily sumptuary; it is desired to regulate the traffic almost to the point of suppression, perhaps. Ordinarily a good revenue would be secured, but revenue is a very secondary consideration. Prices will be placed above the level of highest net profit, and not improbably the ideal of regulating consumption will be so vigorously pursued that profits will disappear altogether.

2. Secondly, we have the group of so-called "fiscal monopolies." France, for instance, monopolizes the manufacture of matches, cigarettes, and tobacco in general; Japan has recently gone farther than any other country in the creation of fiscal monopolies; while Prussia, Austria, Italy, Spain, and other European countries maintain public lotteries — as did many of the American colonies during the eighteenth century. The

[1] See pp. 425 and 706 for further discussion of the single tax.

primary object of the State in undertaking these enterprises is public revenue, gain; and naturally a monopoly price is charged, the price which will yield the greatest net revenue.

3. Next, we have a group of enterprises consisting principally of the so-called "natural monopolies," which the State undertakes not for suppression, not for profit, but primarily for regulation — to regulate the quality of the product, as in the case of water; to maintain effectively what have been called "equitable conditions for the prosecution of private business," as in the case of railways; to prevent monopolistic extortion and corporate abuse, as in the case of lighting companies, the post office, the telegraph, and the telephone; or to prevent crime and preserve intact the foundations of commercial prosperity, as in the monopoly of coinage. The charges here are ordinarily adjusted to either the "revenue" or the "cost" principle, that is to say, the State will either aim to make a fair business profit such as is secured in competitive private enterprises, or it will endeavor approximately to meet expenses by adjusting its charges to the cost of production. England, France, and Germany, in ordinary years, obtain handsome revenues from their respective postal departments, but in the United States the accounts of the Post Office Department usually show an annual deficit, and taking the world over, the cost principle in this group of industries is probably more common than the revenue principle, and deficits more common than net profits. In the United States the post office has always been regarded as a developmental agency rather than a business enterprise, and might more logically, perhaps, be included in the next category.

4. Finally, we have a large and heterogeneous group of industries which are maintained principally for service, for their educational and developmental influence, not primarily for regulation, and not at all for profit, but "for the public good." We include here not only schools and educational institutions of all kinds, but roads and canals; the savings banks and public pawn shops maintained in several countries of continental Europe; workingmen's insurance as developed by Germany, Austria, and several of the Australian commonwealths; and model manu-

facturing establishments such as France maintains for the production of tapestries and fine porcelains. In this group charges will sink to a minimum, and in some lines of enterprise, such as education, practically disappear. Revenue here is not only a minor, but is almost a negligible, consideration.

A brief consideration of the incomplete list of State industries given above brings out several important truths. In the first place, it is evident that only a few of these industries, the fiscal monopolies, have been taken over by the State for the purpose of revenue, and fiscal monopolies are decreasing rather than increasing in relative importance. In the second place, it is equally as clear that, on the whole, public industries are sources of expense and not of profit. When Professor Bastable, for example, tells us that in England, in the fiscal year 1893–1894, only 6 per cent of the national revenue came from public industries and other non-tax sources, that in the local revenues of England and Wales (1891–1892) taxation stood to other sources of revenue in the ratio of five to one, that in Prussia about 20 per cent of the national revenue comes from the domain and industrial enterprises, and in India something less than 50 per cent from "quasi-private sources of revenue," he is careful to warn us that the statistics take no cognizance of interest payments chargeable to the several industries, or of depreciation, or of related industries in which deficits and not profits were secured. When estimating the importance of State railway earnings in the revenue account, no cognizance is ordinarily taken of the canal deficit. In the third place, we perceive from the nature of the industries that they cannot wisely be operated for profit in many cases. Education, for instance, has been taken over by the State for the very purpose of charging less than the cost of the service. The unquestionable tendency is for the prices of goods and services supplied by a democratic State to sink below the cost of production, and this, in itself, is neither good nor bad, fortunate nor unfortunate. The public financier, in adjusting the charges, must not look to profit. His only aim is the *salus populi*, and this policy requires here a prohibitive price, there a cost price, and again free service. Finally, it

appears, the problem of public charges can be settled only with reference to a particular time, place, and industry. England finds it expedient to raise a handsome revenue from her post office, while in most years the United States manages her post office at a loss. Waterworks are successfully conducted by most of the large American municipalities, but public lighting experiments in this country have not been equally successful. India raises half of her revenues from non-tax sources largely because heavy taxation of the ordinary kind would be impossible. The French tobacco monopoly succeeds because the French government can supervise and trace almost every pound of tobacco grown in France. In the United States this would be impossible.

Although we cannot decide in a general way what theory of charges should be followed in particular public industries, it is possible to lay down general rules which will assist us in reaching a correct conclusion in specific cases. Assuming that the industry in question supplies a service rather than a commodity, merely to save words in the discussion, we must first of all inquire: (1) Is the service helpful or harmful in its net social effect? According as it is one or the other, we will incline in our charges toward the gratuity principle or the prohibitive principle. If harmful, however, it is plain that we must not make the charges high enough to encourage smuggling or illicit manufacture. If helpful, on the other hand, we cannot at once decide upon the gratuity principle, but must inquire further: (2) How generally is the service enjoyed? If only a small portion of the community enjoys the service, it would usually be unjust to charge less than cost, because the deficit would be borne by general taxation falling upon the entire community; unless, indeed, the benefit to one restricted class is seen to be of advantage to the whole community in such a degree that the rest of the community is willing to bear the deficit, as in the case of public charity.

(3) Assuming that the service benefits the whole community, this is still not sufficient to justify a charge less than the cost of production. The problem is one of comparative costs. We must inquire whether greater benefit would not be secured by

charging enough to raise a profit and then distributing that profit through the maintenance of some other gratuitous enterprise, or, if the tax system weighs heavily on the poor, by remitting taxation to the extent of the profit (4) If all these questions are answered in favor of the gratuity principle, we still must consider what effect gratuitous service will have upon the cost of the service. Will it encourage wastefulness? Free city water, for example, would probably prove impracticable because of waste, but free parks or free education do not lead to inordinate or unnecessary consumption. The question is a vital one, but it is not always to be answered one way, as some critics of government ownership seem to believe. (5) Closely related to the above is the question of pauperization. Some things the State may safely give away, and some not. The modern city, for example, may give free band concerts, in our view, to the undoubted edification of the community; but in Rome the public games demoralized the populace. (6) Finally, we have to ask what effect gratuitous service will have on incomes. Henry George proposed that our cities should operate the street car lines gratuitously, and the argument in its favor is far stronger than might be expected on first thought. But what effect would this gratuitous service have upon the incomes of the laboring classes? Take the case of the worker in New York City earning $3.00 a day. Will his wages remain at $3.00, if street car service is offered free of charge? Will not the migration to New York be increased, so that wages will fall? And may not the gain ultimately fall to owners of house property in the form of enhanced rents?

All these questions must be answered before the tariff of charges can be adopted, and it is plain that the answers will be determined by the particular conditions of time, industry, and place, particularly by the character of the industry. The nearest approach to a general rule which can be formulated, may be stated as follows: In proportion as a service or commodity tends to the upbuilding of character and personality, we should, so far as fiscal conditions permit, gradually move in the direction of the principle of gratuitous service. If the service or commodity

itself is widely consumed and is as desirable as any vendible commodities which would probably be purchased from possible revenues yielded by charges for the service, particularly if large consumption is desirable and waste in consumption does not become excessive, the principle of gratuitous service may be recommended.

Limitations of space prevent further treatment of the subject of public industries. The important thing to understand is that the moment an industry is taken over by the government, that moment the question of profit — which is the vital consideration under private management — becomes of secondary importance, subordinate to questions of public policy; and the interjection of public policy into the determination of prices or charges, creates a problem whose complexity and difficulty can scarcely be exaggerated. At the present time, for instance, we do not even know whether our postal rates on second class mail matter pay for the cost of carriage and delivery, to say nothing of the question whether such matter ought to be carried at less than cost. Just now the indications are that the State will take over an increasing number of industries, or at least exert a constantly increasing influence upon the rates and charges of quasi-public industries. Under these circumstances our present duty is to institute, both in public and quasi-public industries, a thoroughgoing system of cost accounting, so that we shall understand upon what footing each branch of the industry rests. Our second duty, which falls primarily upon economists and statesmen, is to develop a far more satisfactory theory of public charges, for at the present time we hardly understand the many factors that must be considered in this problem, much less the net meaning or resultant of these factors.

QUESTIONS

1. Are public debts a burden when represented by paying investments? by non-revenue-bearing investments?

2. Do State debts indicate impoverishment of the people? Why?

3. What defects are found in the sinking-fund method of retiring public debts? Enumerate the advantages of the serial bond.

4. How was the State supported in primitive times? What connection is there between taxation and representative government?

5. What has been the principal aim of the United States in the management of public lands? How has this aim changed?

6. Why do the poorer classes benefit least by the homestead acts and by the sale of the public lands at prices below their real value?

7. What kinds of land should be both owned and managed by government? Why?

8. What are the advantages and disadvantages of the royalty or lease system? To what kinds of land should it be applied?

9. What conflict is there between modern industrial methods and the project of giving land to the landless?

10. What connection is there between "natural right" and the single-tax scheme?

11. Is there any absolute, inalienable right to life? to anything? Explain.

12. Should State industries be managed so as to yield a profit? Is a profit inconsistent with good State management? Is any general tendency, with respect to profits, discernible in the management of particular public industries?

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CHAPTER XXXIII

PUBLIC RECEIPTS FROM FEES, SPECIAL ASSESSMENTS, AND TAXES

Definitions. — If the reader will run over the classification of public industries given in the preceding chapter, he will notice that the corresponding payments — which descend, it will be remembered, from prohibitive to gratuity charges — fall into two main classes: those imposed upon the consumer or purchaser who specially benefits by the service, and those — like the revenues devoted to the maintenance of education and public parks — imposed upon the tax-paying public generally, irrespective of the benefits conferred by the service. Moreover, as we move from the prohibitive to the gratuity group, there is a general though not regular change in the degree and kind of compulsion exercised by the State in collecting the contribution. The State does not encourage the purchase of intoxicating liquors under the Gothenburg system in order that the revenue may be as large as possible, — it actually discourages their sale; the use of the postal money order is mildly encouraged, but you may send your money by express if you desire; one is not forced to marry, but if one marries one is compelled to take out a marriage license; and whether one uses the public schools or not, one must help pay for their maintenance. Finally, it will be noticed that as the element of compulsion increases, the public interest in the service changes, and generally though not always increases. The wood sold from the government forests is merely a commercial by-product of an enterprise maintained by the government for other purposes; the marriage-license fee benefits the individual, but is imposed primarily to protect the morals of the community; while the tax to maintain the public schools is paid solely for the purpose of benefiting the general public.

There are, then, three general principles of classification: (1) the assignability of the benefit of the service to an individual; (2) the degree of compulsion exercised by the State; (3) the degree and kind of public interest involved in the service. The more voluntary payments for the more commercial services made by persons who receive a special benefit from these services are called *public prices;* the less voluntary payments for services in which the public interest is less commercial in character, made by persons who receive a special benefit from the services, are called *fees.* Compulsory contributions, "levied in proportion to the special benefits derived, to defray the cost of a specific improvement to property, undertaken in the public interest," are, in the United States, called *special assessments;* and compulsory contributions, exacted by public authority according to some general rule, without reference to the special benefit conferred by the services to whose maintenance the contributions are devoted, are called *taxes.*

The student is warned that little regard is paid to these distinctions in everyday usage. The words "fees," "taxes," "licenses," "tariffs," "rates," "charges," and the like are hopelessly confused; and even census statisticians find it impossible to distinguish, in public accounts as they are now kept, between prices, fees, rentals, licenses, and some kinds of taxes. The utility of the terms is in emphasizing the important truth that these great categories of public contributions must be distinguished and differently treated by the legislator and student, by whatever terms the different categories are designated.

Fees.[1] — In the exercise of its most fundamental and general functions, the government frequently confers, in an incidental way, special benefits upon particular individuals. Thus the courts, whose function it is to administer justice in general, find that this function must be performed by deciding disputes between particular litigants, one of whom usually benefits by the

[1] Public prices have been discussed in the preceding chapter. The small tuition charges paid by students in state universities offer a good illustration of fees; they are non-commercial in character, semi-voluntary, and in amount fall considerably short of the cost of the service.

decision. Now if the government is disposed to take advantage of the opportunity, it is evident that much revenue may be raised from the individuals who, in a more or less adventitious way, benefit from the government activities; and where the nation is poor or the people averse to taxation, much dependence will be placed upon fees. As wealth increases, however, and the government becomes more democratic, there is a growing disposition to support general functions by general contributions — taxes — and the relative importance of fees is likely to decline. On the other hand, there is no likelihood that fees will wholly disappear, as they exercise a wholesome influence in preventing waste. Court fees, for instance, would probably have been abolished before this, if they did not serve to prevent litigious persons from carrying their quarrels to the courts for settlements. Because of this restrictive and economical influence exercised by fees, they will undoubtedly retain a permanent place in the public revenues of even the more advanced and democratic states; but their fiscal importance will very likely decline.

During the colonial epoch the fee system was much abused in America, many offices being wholly maintained by fees which should have been abolished or supported by taxation. At the present time, however, the evils of the system arise not from the number or amount of fees, but from their connection with the salaries of certain public officials. Many officials are allowed to keep the fees which they collect in lieu of fixed salaries, and this practice results in very serious evils. In the first place, some fee-paid offices, particularly those of sheriff and register of deeds in populous districts, have come to yield princely incomes, and the scramble for these rich offices constitutes a prolific source of political corruption. In the second place, fee payment of public officials often impels them to an excessive and pernicious activity, in which their own interests and those of the commonwealth are placed in direct conflict. In a few states, for instance, prosecuting attorneys are paid so much per conviction, the fee increasing with the heinousness of the offense, while in many cities and villages the police force and city courts

are supported partially by fees and fines. Under these circumstances, officials bend their activity to the conviction of offenders, not to the prevention of crime and the reform of the criminal; they frequently set traps for persons who are likely to break the law, creating the temptation and the opportunity in order that they may increase their emoluments. In Wisconsin, sheriffs were for many years paid so much per head for the tramps whom they fed and lodged. The system, as has been said, placed a "direct premium upon vagrancy." [1] During the existence of this system in Wisconsin, tramps were "often furnished with liquor, tobacco, and newspapers, to induce them to return." Finally, the fee system has been a constant and shameful corrupter of justice as dispensed by justices of the peace in "the people's courts." In most states there are several justice's courts open to the plaintiff who desires to bring suit. In consequence, a disgraceful competition springs up, each justice endeavoring to swell his business and multiply his fees by constantly finding for the plaintiff, with the result that our judicial system is thoroughly vicious at the point where perhaps it comes in closest contact with the masses of the people.

The remedy is in the substitution, wherever possible, of regular salaries for fee stipends, and in the institution of methods of accounting which will hold public officials to strict accountability for every fee collected. Fortunately, the movement of legislation, while slow and obstinately fought by some politicians, is in the right direction; and in almost every state public officials are being required to turn their fees into the general treasury and accept instead a fixed compensation.

Special Assessments. — Where the operations of the government confer a special benefit upon some restricted group of individuals, those individuals are often led to exercise undue influence upon the government to secure that service, if the latter is supported by appropriations from the general funds. Jobbery and graft are encouraged. On the other hand, if the only way the group of individuals can secure the service is by expenditure

[1] T. K. Urdahl, *The Fee System in the United States*, p. 211. The other quotations cited in this section are taken from this work.

of the common funds, the government or legislature often delays the expenditure unduly for fear of criticism or because of unwise parsimony. Thus in cities where the method of special assessment is not used, it often happens that the opening of a street is delayed long after the time when it would be desirable for the citizens most interested, although perhaps the latter would be willing to defray the cost from their own pockets, were this permitted.

A recognition of these facts has led in recent years to a striking development, in the United States, of the benefit principle as exemplified in the method of special assessments. The special assessment has been used sporadically in many countries for several centuries, but it was first regularly used on a wide scale in the United States, in the latter half of the nineteenth century. Its place and importance among the revenues is shown in the table on page 695, from which it appears that special assessments aggregating over $113,000,000 were collected in 1902. This amount constituted a little more than 4 per cent of the revenue receipts; but as the national and state governments (except Massachusetts) make practically no use of the special assessment, its real importance appears more clearly from an examination of its place among municipal revenues. In the incorporated places having 2500 inhabitants or over in 1913, special assessments yielded nearly 9 per cent of the revenues and more than one eighth as much revenue as all kinds of taxes.

The special assessment has been approved by the American courts because it places at least a part of the cost of the service upon the beneficiaries of the service, a rule which can sometimes, but not often, be violated without subjecting the government to excessive and corrupting private influence. The special assessment has appealed to the people, however, because it permits public improvements to go ahead at a pace which would be impossible if taxation were the only fund for defraying the cost of the improvements. Needless to say, the special assessment has occasionally stimulated extravagance and premature development. Thus, in New Jersey, in the last quarter of the nineteenth century, several large cities were practically thrown into bank-

ruptcy by undertaking ambitious public works, in which the special assessment played an important part. And in New York, under the Tweed régime, the system of special assessments furnished an excuse for undertaking public works in which corruption flourished, and which probably would never have been undertaken, had it been known in the beginning that their cost would have to be partially defrayed by taxation. "The works had been carried on upon a scale of audacious extravagance, and in portions of the city where they were not at the time justified. Great avenues were laid out and improved largely for the purpose of giving fat jobs to favorite contractors, and to provide fine drives for the pleasure and convenience of others than the abutting property owners." [1]

On the whole, however, the special assessment has been an unusual success as a fiscal expedient, and has proved an important, if not an indispensable, factor in the development of American cities. Where its use has been followed by extravagance, speculation, or jobbery, these evils are to be attributed almost wholly to political corruption of the government, and only in a very small measure to the special assessment itself. Most of the evils, moreover, have arisen where the city government, or some department of the city government like that of public works, has been given the power to order the improvements against the will of the property owners involved or where, as was the case in the example cited above, assessments upon particular lots were permitted to exceed the value of the property. Special assessments should not be levied against the will of a majority of the property holders subject to assessment, except by a two thirds or three fourths vote of the city council, and in no case should the assessment exceed a small fraction of the value of the property against which the assessment is laid. Where these rules are observed, the special assessment is unlikely to lead either to premature development or hardship upon the property holder.

Taxes. — In this country more than 70 per cent of all the public revenues are obtained from taxes, so the problems of

[1] Victor Rosewater, *Special Assessments*.

RECEIPTS OF THE NATIONAL GOVERNMENT, STATES, COUNTIES, AND INCORPORATED PLACES HAVING A POPULATION OF 2500 AND OVER: 1913

A. REVENUE RECEIPTS

SUBJECT	AGGREGATE	NATIONAL GOVERNMENT	STATES	COUNTIES	INCORPORATED PLACES
	Total	Total	Total	Total	Total
Population estimated as of July 1, 1913	97,086,378	[1] 97,086,378	96,815,253	[2] 85,738,717	[3] 45,682,236
Revenue receipts	$2,799,497,765	$953,596,637	$367,585,331	$370,043,046	$1,108,272,751
General property taxes	1,082,971,468	—	139,750,303	282,077,069	661,144,096
Special property taxes	397,913,352	$313,953,234	67,675,933	805,419	15,478,766
Poll taxes	17,133,205	4,720,728	2,965,069	5,817,855	3,629,553
Special assessments and charges for outlays	113,218,693	—	6,454,807	9,323,078	97,440,808
Business taxes	170,409,713	113,384,816	[4] 53,642,322	92,866	3,289,709
Liquor licenses and other imposts	309,663,321	230,146,332	20,992,857	6,577,556	51,946,576
Other business licenses	22,534,712	205,907	8,589,208	1,474,255	12,265,342
Non-business license taxes	12,945,902	—	6,450,932	1,703,316	4,791,654
Fines, forfeits, and escheats	14,121,446	2,444,025	1,428,011	3,531,537	6,717,873
Highway privileges	13,685,951	—	—	164,760	13,521,183
Interest and rents	62,437,933	44,103	21,300,430	5,531,485	35,561,915
Subventions and grants	78,372,386	—	3,190,750	23,682,813	51,498,823
Donations and gifts	5,689,055	—	434,526	283,233	4,971,296
Earnings of general departments and miscellaneous	105,385,137	17,993,561	32,994,761	28,564,467	25,832,348
Earnings of public service enterprises	393,015,491	270,703,931	1,715,422	413,329	120,182,809

B. NON-REVENUE RECEIPTS

Non-revenue receipts	$2,811,875,633	$1,096,216,969	$159,061,504	$525,625,406	$1,030,971,754
From sales of investments and supplies	115,137,755	3,558,788	27,648,759	3,383,364	80,546,844
From issue of debt obligations	1,955,669,999	1,059,082,850	77,906,436	86,051,348	732,629,365
From trust and agency transactions	549,318,592	20,145 349	28,519,067	425,331,927	75,322,250
From counterbalancing transactions	27,806,857	13,429,982	1,441,082	3,136,937	9,798,856
From general transfers	163,942,429	—	23,546,160	7,721,830	132,674,439

[1] Includes population of Kansas enumerated as of Mar. 1, 1913, by state census.
[2] Excludes population of independent cities, counties under municipal government, St. John County, Fla., and the State of Rhode Island.
[3] For places of less than 8000 inhabitants, enumerated as of Apr. 15, 1910. [4] Includes $313,616, receipts from the income tax.

taxation are the most important with which the public financier has to deal. These problems are of two varieties; those dealing with the nature of taxation in general, and those dealing with specific taxes. The remainder of this chapter will be devoted to the general questions. The following chapter will be given over to the more specific problems of American taxation.

Justice in Taxation. — By far the most important lesson which the student of fiscal questions has to learn is the supreme necessity for tolerance and breadth of view. The factors which condition justice or make for equity in taxation are exceedingly numerous; and the mistake most commonly made by superficial thinkers is to seize upon some one element of justice, build a philosophy upon that alone, and vigorously condemn everything that does not harmonize with their petty and bigoted little system. No rule less sweeping than that of the general welfare can serve as a safe guide in public finance.

1. Some writers go so far as wholly to deny the right of the State to take private property by taxation. These writers forget that there is no such thing as absolutely private property. As the State determines what shall be private property, so also it determines the conditions of its existence, and the most fundamental condition of private property is the obligation to contribute to the support of the State. The rights of private individuals have always been of a more or less limited nature, and among the rights reserved by the people in their organic capacity will be found, in every civilized state, the right to take a portion of the wealth produced for such purposes as the lawmaking power may deem fit.

2. However, the State must exercise this power over private property in an equitable manner, or as this maxim is ordinarily expressed in the terminology of constitutional law, *taxation must be equal and uniform*. Thus, for example, the constitution of West Virginia provides that: "Taxation shall be equal and uniform throughout this state, and all property, real and personal, shall be taxed in proportion to its value, to be ascertained as directed by law." Now, if we examine the way in which these requirements of equality and uniformity have been

interpreted in the administration of practical justice, we find that equality and uniformity have come to mean little more than this, that taxation shall not be arbitrary, capricious, or plainly unreasonable and that within each class of persons or objects the burden shall be equal. (1) Everywhere the legislature is given a wide latitude in exempting property, so that institutions and industries which are regarded as of peculiar value to the people may be encouraged by freedom from taxation. Almost everywhere, poll taxes which impose an unequal burden upon the poor, liquor licenses which impose unequal obligations upon those who pay them, inheritance and corporation taxes which single out particular classes of society for unusual taxation, are sustained by the courts. *Justice in taxation, then, does not require rigid equality or narrow uniformity of treatment.* (2) Institutions which are socially harmful may be subject to peculiarly drastic and oppressive taxation; that is to say, *justice may take into account sumptuary considerations.* (3) Old taxes, which would not be used if they were not already intrenched in the fiscal and social system, are permitted to endure; *justice takes cognizance of the fact that, other things being equal, an old tax is a good tax by very reason of its age.* (4) Indirect taxes which weigh more heavily upon the poor than the rich show no signs of disappearing; that is to say, *justice gives due weight to the productivity of a tax, its cheapness of collection, and convenience of payment, and balances these considerations against factors which we are accustomed to regard as more fundamentally ethical.* (5) Taxes may be employed to suppress state banks of issue, protect home manufactures, and in general to accomplish political and social ends other than the mere raising of revenue. Taxation is seldom the best agent of social or political reform. If there is an evil which needs eradication, the best way is to suppress it directly, if possible, rather than discourage it a little by general taxation. *But this does not affect the general proposition that where taxation is an efficient remedy, or the only remedy, justice sanctions its employment.* (6) Finally, it is plain that, however we strive, nothing better than approximate justice can ever be secured in taxation. A system that frankly recognizes

this truth and makes for rough justice, by the imposition of taxes which are simple, stable, convenient, inexpensive, and productive, is far better than one which attempts to secure exact justice through complex and delicate schemes of taxation which cannot be definitely or efficiently administered.

3. The theory of justice most widely accepted by American courts at the present time is expressed in the maxim that taxes should be proportioned to *benefits* derived. Like other rules of justice, this maxim contains elements of truth and elements of error. It is a fairly helpful guide, for instance, in dealing with public revenues other than taxes. Public prices, fees, and special assessments should, as we have seen, be proportioned to benefits, unless there is strong reason for departing from the rule. And in the apportionment of taxation among districts or governmental sections, the rule still retains, and probably always will retain, a large measure of validity. Taxation, we say, must pertain to the district taxed, meaning by this that under ordinary circumstances it is not wise to tax District A for the benefit of District B; although there are important exceptions to this rule. But in the apportionment of taxes among the individuals of a given district, the rule has little or no place. This conclusion follows, if for no other reason, from our definition of the word "taxes," which we confine to contributions levied without reference to special benefits received, either because no special benefit can be assigned, or because (as in the case of free schools) we specifically desire to lift the cost of the service from the shoulders of some of those who specially benefit by the service. Moreover, in general, it is impracticable to determine what proportion of the general benefits of government accrue to particular individuals.

4. At the present time a great majority of economists agree that taxes should be apportioned according to "faculty" or *ability to pay*. It must be confessed that the rule is not very satisfactory. No simple measure of ability exists, and many taxes, which under a superficial examination seem to conform to the rule, such as the general property or income tax, are found upon closer examination to violate the rule in many ways.

Despite all these defects, however, the ability principle has elements of great strength. It satisfies our sense of justice, in the first place, when explicit reasons cannot be given for departing from a general rule; and it expresses the ideal towards which we strive in voluntary contributions to the church or other voluntary joint enterprises of a social nature. In the second place, we can frequently ascertain with certainty that the rule is being violated, when we cannot define its meaning positively, and hence it is capable of practical application in a negative way. We may therefore accept the rule in this sense, that unless other treatment is justified by the considerations cited in paragraph 2, above, or by analogous reasons, no tax which is plainly disproportional to the ability of the contributors should be employed.

5. Accepting the ability principle as the best rule for general taxes as distinguished from the specific taxes noted in paragraph 2, we at once encounter the difficult question, how is ability to be measured? Different writers have recommended as the basis or measure of ability, income, outgo or consumption, and property. A little consideration will convince the reader that each of these measures is marked by minor defects. The consumption of the poor, for instance, is out of all proportion to their ability to bear the burdens of the state. Property, on the other hand, differs widely in its productiveness, and, moreover, many persons with a little property have large incomes, and therefore great ability to bear taxation. Incomes, similarly, differ in permanence and security, and equal incomes are called upon to support very unequal numbers of persons. Fortunately, it is not imperative in practice to make a decision between these measures of ability. The necessities of fiscal administration make it imperative in actual practice to employ all three bases of taxation. Property, consumption, and income are all employed in the United States at the present time and will unquestionably continue to be employed for many generations.

Progressive Taxation. — After we adopt any concrete measure of ability, we soon realize that it is only approximately correct, because we are immediately confronted with the question:

Does ability increase in direct proportion or more rapidly than our measure of ability; in other words, shall taxes be laid in direct proportion to income, property, etc., or shall the rate be increased as the amount of income or property increases? The first method is called *proportional* taxation, the second *progressive* or *graduated*. If the rate diminishes as the income or property increases, we speak of it as *regressive taxation;* and if the rate increases faster than the income or property, but toward a fixed limit which it can never exceed, it is referred to as *degressive taxation*. The last kind of rating is of course a special variety of progressive taxation, and usually results from the combination of a nominally proportional rate with the exemption of a fixed sum from all incomes or assessed wealth. The American property tax is in principle a degressive tax, though it is regressive in practical effect.

From the theoretical standpoint our real knowledge upon this subject is exceedingly unsatisfactory. On the whole, the arguments of those who approve progressive taxation are more convincing than those of its opponents, and a majority of economists at the present time agree in asserting that ability increases faster than income, property, or any common measure of ability. If we construe ability as ability to bear sacrifice (as John Stuart Mill and some other authorities do) and confine our attention solely to the consumer, there can be no doubt that progressive taxation is the means by which the least sacrifice will be visited upon the community as a whole.[1] This is a strong argument, because one of the chief immediate effects of taxation is to deprive persons of the necessaries, conveniences, and luxuries of life, while the maxim of the greatest good to the greatest number — or as it works out in taxation, the least sacrifice to the least number — is one of the most widely accepted rules of social conduct. Surveying the ability theory from the positive standpoint of ability to acquire or produce property, we find the testimony almost universal, that as the fortune or income increases, the ability to earn or produce more increases at an accelerating pace. "It is the first thousand that counts," in the language

[1] See T. N. Carver, *Essays in Social Justice*, pp. 401–406.

of the successful man who is telling the younger generation how he succeeded.

Coming to the more concrete and more practical arguments, we find that the balance of opinion also inclines to the side of those who favor progressive taxation. Let us briefly recapitulate these arguments and attempt to estimate their net resultant. Those who oppose progressive taxation charge that the proposal is socialistic, that it would discourage the accumulation of wealth, that it would not be particularly productive, — meaning by this that the element of progressivity adds little to what would be produced by a proportional rate, — that it would stimulate fraud and evasion, that it would interfere with the device known as "collection at the source," and that finally the whole principle is arbitrary and capricious in the sense that there is no natural limit to the increase of the rate.

To these charges the defendants of progressive taxation present plans [1] by which collection at the source and progressive rating may be successfully combined in the same system; and reply, further, that terms are immaterial and questions cannot be settled by bandying epithets such as "socialistic," "anarchistic," and the like; that every tax discourages the accumulation of wealth; that whether the tax will be productive or not, it will relieve the poorer classes to the extent that the progressive rates do actually fall upon the rich; that persons capable of evading their obligations to the government will attempt to evade proportional taxes as well as progressive taxes; and that all taxation is more or less arbitrary, resting upon the judgment and common sense of the legislature. The exemptions made in every tax law, the size of a license fee of any kind, the rates of excise and customs duties, are all "arbitrary" and unlimited in the sense that progressive taxation is arbitrary and unlimited. Finally, the defendant of progressive taxation points out that, owing to the great prominence of indirect taxes in our revenue system and the tendency of assessors to assess large properties at a lower proportion of real value than smaller

[1] *Report from the Select [British] Committee on Income Tax*, 1906, pp. iii–vii. Compare also the provisions of the federal income tax.

properties, American taxation today is in practice regressive, and some progressivity is needed, if only to balance the admitted regressivity of existing taxes.

While general considerations thus seem to warrant persistent effort to introduce a moderate measure of progressivity into our direct taxes, the student is warned that this should not be done in any doctrinaire or offhand fashion. A thousand considerations of practical expediency must be taken into account in the shaping of a revenue system, and in the end we are more likely to attain the goal which the advocates of progressive taxation seek by careful exemptions from taxation, by special taxes upon corporations, monopolies, inheritances, and certain forms of income, *and by directing expenditures to the succor of the weak and the equalization of opportunity*, than by exclusive dependence upon any one far-reaching tax such as a progressive income or property tax.

No tax system, then, can be fairly judged without reference to the character of expenditures. Where the expenditures are wasteful, corrupt, and unwise, heavy taxation is a curse, — although even here the rational method of reform is rather to root out the corruption and improve the administration, than to reduce taxation, even if temporarily it may be wise to do the latter. But where the expenditures are on the whole wisely and beneficently made, heavy taxation is not an evil. No country was ever yet ruined by large expenditures of money by the public and for the public. The true principle to be observed in levying taxes was tersely expressed in the 41st section of the constitution adopted by Pennsylvania in 1776: "No public tax, custom, or contribution shall be imposed upon, or paid by, the people of this state, except by a law for that purpose; and before any law be made for raising it, the purpose for which any tax is to be raised ought to appear clearly to the legislature to be of more service to the community than the money would be if not collected, which being well observed, taxes can never be burthens."

Direct and Indirect Taxes. — The considerations just adduced have an important bearing upon a problem which will probably

become acute in the near future: the question of raising additional revenue by indirect taxation. Indirect taxes have been strongly condemned by many authorities in the past, largely because they weigh more heavily upon the poor than the rich. But if we are to finance successfully a double program of military preparedness and social insurance in the future, it will probably be necessary not only to keep most of the indirect taxes which we now have, but to adopt others. There are practical limits to direct taxation in every country. Pushed beyond a certain point, direct taxes discourage both saving and business enterprise. Many of them — although the income tax is a marked exception — fall upon the taxpayer in lean years as well as in prosperous years, and must be paid even though the money to pay them has to be borrowed by the taxpayer. Indirect taxes, on the other hand, are usually paid in small driblets and there is, in their payment, a voluntary element which makes them easier to bear. The person who elects to drink beer may pay proportionally a large indirect tax, but he is not compelled to drink beer. Moreover, indirect taxes may be levied upon articles of luxury and other commodities consumed predominantly by the wealthier classes, so as to operate as progressive rather than regressive taxes, when considered from a broad social standpoint. Finally, even regressive taxes may be helpful to the poorer classes if public expenditures are directed in sufficient volume to the support of education, social insurance, and the equalization of opportunity. It is more important that expenditures should be progressive in their social incidence than it is to collect taxes in accordance with schedules of progressive rates.

The Shifting of Taxes. — Up to this point we have been speaking as if a tax must remain where it is originally placed. This we know is not always the case. Excise taxes, for instance, are usually levied with the expectation that they will be passed or *shifted* from the business man, who first pays them, to the consumer or some other person. The conditions which control the shifting of taxes must evidently be considered — at least in a very general way — before we discuss the practical working of the American system of taxations.

The word " shifting " usually refers to the increase of price by which the original payer of the tax attempts to recoup himself. This increase of price is usually accompanied by collateral economic disturbances or dislocations — suggested by the phrase " repercussion of taxes " which is frequently employed in this connection — that are quite as important as the mere change in price. For instance, an excise tax (per unit of product) upon a monopoly may raise the price by as much or even more than the tax itself. But the monopolist nevertheless feels the burden of the tax in reduced profits. When we say that a tax is shifted, then, we do not imply that the original payer evades all the evil effects of the tax.

Mobility is the chief factor which controls shifting; and this in turn is largely dependent upon the inclusiveness or scope of the tax, and upon the existence of monopoly or differential advantages. Place a tax upon a person or thing which can easily move to a jurisdiction where such taxes are not imposed, and the tax is very likely to be shifted. Local taxes upon mortgage loans offer a good example. Such taxes are very likely to raise the interest rate by as much or a little more than the tax rate, the " little more " being explained by the trouble imposed upon the lender in looking after the tax and the risk that the tax rate will be increased. On the other hand, if mortgage lenders are constrained by ignorance or custom or the existence of particularly high rates in this district to keep on supplying the old amounts of loans, the tax will not be shifted. Unless the supply can be or is reduced by the tax, shifting will not ordinarily take place.

Naturally, therefore, the particular nature of the supply is of prime importance. We may illustrate by an excise tax per unit of product upon competitive industries of various kinds. In industries subject to the law of constant expense, a fixed tax per unit of product will raise the price by just the amount of the tax, in theory. In industries subject to the law of increasing expense, however, the reduction of the supply caused by the tax somewhat reduces the expenses of production per unit exclusive of the tax, and on this account prices in such industries will in-

crease by an amount less than the tax. In industries subject to the law of diminishing expense, on the other hand, the price will be raised by an amount equal to the tax, plus an amount equal to the increased expense of production caused by the limitation of supply.

Mobility, as has been said, is the most important factor in this connection, and it may be restricted or destroyed in a variety of ways. Monopoly limits mobility, and, as we have already seen,[1] the monopolist cannot shift a fixed tax or a proportional tax on net profits unless the tax is so high as to reduce monopoly profits below the amount that could be earned on the same investment in a competitive industry. For somewhat similar, but not exactly the same reasons, differential gains from durable property are peculiarly susceptible to taxation. Thus, economists generally indorse the proposition that a tax on economic rent falls upon the landlord and cannot be shifted. The validity of this depends both upon the durability of land and the fact that the tax is levied upon a differential element. If land wore out and had to be replenished, the tax would reduce the future supply of land and hence raise its price and its rent in the future. Similarly, if the tax were levied upon the product of marginal or no-rent land, it would elevate the margin, reduce the supply of those products or services which land affords, and in this way again raise prices and partially reimburse the landlord. But, by hypothesis, neither of these suppositions is true. Land, as we define it, does not wear out; and at the margin land yields no economic rent.

The proposition that a tax on economic rent cannot be shifted is true, moreover, only of a proportional tax. A tax of so much per bushel or pound upon agricultural produce would move the margin of cultivation and thus affect prices. Indeed, the exact form of a tax — whether fixed, proportional, or progressive, upon net or gross returns, upon product or upon profit — is of fundamental importance always. Generally speaking, proportional taxes upon net income are less easily shifted than other forms of taxes.

[1] Pp. 202, 203.

If the object of taxation be durable and the tax a special or exclusive one, the price of the object is likely to be reduced by an amount equal to the capitalized value of the tax. Prospective purchasers of land take into account the taxes that are likely to be levied upon it, capitalize these, and subtract their capitalized value from the amount which they would pay for the property if it were not liable to taxation. The apparent result of this *capitalization or amortization of taxes*, as the process is called, is to place the burden of an endless succession of taxes upon the original owner, and relieve subsequent purchasers of any real burden.

Many present-day followers of Henry George find in this principle of amortization at once a justification and a method of securing for society all economic rent. Under present conditions, they say, a man who buys land wholly escapes taxation upon it. Consequently, in order to make landowners pay as much as other people we should have to increase the tax upon land by a rate equal to that paid by the average tax-payer as often — say every thirty years — as the land of the community changes holders. In this way the State could gradually and with justice absorb all economic rent.[1]

But this whole chain of reasoning is fallacious for three reasons: (1) What the prospective purchaser capitalizes and deducts is not the entire tax on the land, but the excess of that tax over similar taxes upon other investments open to him. A new purchaser of land does not "buy free of taxes," as is so often stated; what he does is to buy free of any excessive or abnormal tax burden. After the purchase he not only pays taxes in appearance, but in actual fact pays the average tax rate. (2) In so far as this program of the single taxers was anticipated and understood, it would visit the whole burden of the "reform" upon present owners, instead of being distributed over several generations. Subsequent purchasers would discount these periodic increases of the tax and pay to owners for their land only the present value of the rapidly vanishing income

[1] See the paper upon "The Single Tax" by C. B. Fillebrown in *State and Local Taxation* (Proceedings of the National Tax Association), vol. i, pp. 286–293.

from land. Land would be valued as a terminable annuity. (3) This whole doctrine overlooks the inevitable consequence that, if " the selling value of land is an untaxed value " and if " the burden of a land tax cannot be made to survive a change of ownership," these facts would so increase the demand for land that the profits from its purchase and ownership would not exceed profits in other lines of investment. Given plenty of time, active competition, together with a knowledge of the facts of the situation, and such inequalities of taxation are inevitably smoothed out by the natural movement of capital toward the taxless field or away from the field in which burdens are particularly severe.

This inevitable reckoning of taxation among the disadvantages of industry brings it to pass that *many old taxes are diffused over the entire community.* Such diffusion does not take place when the nature of the supply prevents it from varying in nice correspondence with the prospects of profit. A poll tax upon laborers, for instance, will in our opinion not be shifted, as it is likely to lower their standard of living, stimulate the birth rate, and in turn (other things being equal) actually reduce wages. But exclusive taxes on capital and business will be diffused; and for this reason there is a profound practical truth in the famous dictum of Canard that " every old tax is good; every new tax is bad," when sympathetically interpreted. Of course this doctrine assumes that industrial changes are infrequent. The tax system must and should vary with changes in the fortunes of business enterprise. The development of a new industry making unusual and unexpected profits offers a good opportunity of relieving an old industry that has unexpectedly fallen upon evil days. And for this reason it is highly desirable that state constitutions prescribing a rigidly uniform system of taxation should be amended so as to permit reasonable classification of property and business for purposes of taxation. All these qualifications of the diffusion theory are true and important. But the fact still remains that under ordinary conditions nothing is worse in a tax system than uncertainty, continual tinkering with rates, and capricious readjustment of methods.

QUESTIONS AND EXERCISES

1. In accordance with what principles of classification do we distinguish fees, special assessments, and taxes?

2. Enumerate six fees commonly employed by state governments.

3. What accounts for the rapid development of the special assessment in the last fifty years? Is it possible to apportion the benefits of a public improvement with any degree of accuracy?

4. Why are liquor licenses distinguished from other licenses and permits?

5. Has the state a greater right to tax land and natural agents than produced wealth?

6. May monopolies be equitably subjected to special taxation? Even if the monopoly rests upon superior efficiency, or upon patent rights justly acquired?

7. Is rigid equality of taxation a primary and fundamental desideratum? Is it possible of achievement? Is there any real distinction between the so-called ethical qualities (of equality, uniformity, etc.) and the so-called administrative qualities (convenience, elasticity, productivity, etc.) of a tax?

8. Is the benefit principle wrong or merely impossible of application? If wrong, why do we retain it in fees and special assessments?

9. Is it easier to measure ability than benefits?

10. Is progressive taxation arbitrary? Can it be satisfactorily considered apart from the effect of public expenditures?

11. Work out the effect of an excise tax on a monopoly subject to the law of increasing expense.

12. Do people buy land "free of taxes"? If so, why does not everyone buy land in order to escape taxation?

13. Can our state legislatures be trusted to "classify" property for taxation fairly and impartially? State the arguments for and against repealing the uniformity provisions common in state constitutions.

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CHAPTER XXXIV

FEDERAL, STATE, AND LOCAL TAXES

Federal Taxation

Constitutional Limitations. — The fundamental character of the American revenue system is determined by those clauses of the federal constitution which provide that "direct taxes shall be apportioned among the several states . . . according to their respective numbers"; that "all duties, imposts, and excises shall be uniform throughout the United States"; and that "no state shall, without the consent of Congress, levy any imposts or duties on imports or exports, except what may be absolutely necessary for executing its inspection laws."

Just what the words duties, imposts, excises, direct and indirect taxes signify, as used in the constitution, has been a matter of considerable discussion. Ordinarily the word *duty* "means an indirect tax imposed upon the importation, exportation, or consumption of goods," being given "a broader meaning than *custom*, which is a duty imposed upon imports or exports," while "the term *impost* also signifies any tax, tribute, or duty, but it seldom applied to any but indirect taxes. An excise duty is an inland impost levied upon articles of manufacture or sale, and also upon licenses to pursue certain trades or to deal in certain commodities."

All these differences turn largely upon the meaning of the words *direct* and *indirect* taxes. According to most economists direct taxes are taxes levied by the state upon those who are expected to bear their burden, while indirect taxes are supposed to be shifted to others. In the economic sense, therefore, poll taxes, property, income, and inheritance taxes are usually called direct, while customs taxes and excise taxes are called

indirect. It is plain that the economic meaning of these words is exceedingly vague, because it is made to turn upon expectations concerning the shifting of taxes, and upon few subjects is there more uncertainty than upon this. Economists have generally protested against any employment of these terms in scientific analysis, and where, because of their frequent employment both in popular discussion and statute law, it has been necessary to retain them, they have tried to introduce a more consistent usage.

Owing to the practical impossibility of maintaining a logical distinction between direct and indirect taxes based upon economic principles, it was commonly thought until the latter part of the nineteenth century that it was necessary to give these terms a strictly historical interpretation, based upon usage current in this country at the time the constitution was adopted. Accordingly, capitation and land taxes were generally believed to be the only forms of direct taxes. This belief was partly due to the fact that the federal Supreme Court at various times had sanctioned the use by the federal government of income, inheritance, and specific property or consumption taxes.

In the famous Pollock [1] case, however, the Supreme Court rendered a decision in 1895 which was generally interpreted to hold that income taxes, so far as they include income from real estate and some other forms of property, are direct taxes. Nevertheless, what was practically an income tax upon corporations was adopted in 1909. It was justified by the Supreme Court as an excise tax, but the principal difference between this excise tax and an income tax proper appears to have been the fact that, instead of being levied upon or on income, it was levied and assessed " with respect to " or in accordance with income.[2]

[1] *Pollock* v. *Farmers' Loan and Trust Co.*, 157 U. S. 429; 158 U. S. 601.

[2] At a later date (January 24, 1916) in the case of *Brushaber* vs. *Union Pacific Railroad Company*, the Supreme Court upheld the constitutionality of the present federal income tax law and Chief Justice White took occasion to expound the tangled meaning of the famous Pollock decision. He announced that "the conclusion reached in the Pollock case did not in any degree involve holding that income taxes generically and necessarily came within the class of direct taxes on property, but, on the contrary, recognized the fact that taxation on income was in its nature an

Finally in 1912 the sixteenth amendment to the federal constitution was ratified, which provides: "The Congress shall have power to lay and collect taxes on incomes, from whatever source derived, without apportionment among the several states, and without regard to any census or enumeration."

The troublous history of the federal income tax has been briefly traced because it illustrates clearly the conditions under which the American people must frame and administer tax laws. Income taxes were introduced during the Civil War and millions of revenue collected under them before their repeal in the early seventies. When revived in 1894 the income tax was invalidated by the Supreme Court in a decision which had momentous political consequences. The adverse decision was then, by a play of words, evaded in the corporation excise tax; and later the entire principle was legitimatized by the sixteenth amendment. Finally, the Supreme Court decided that the income tax is not a direct tax, but under certain circumstances acts substantially like a direct tax. Nothing could illustrate more clearly the metaphysical complexities introduced into tax legislation by constitutional limitations whose final interpretation rests not with the legislature but the courts. Much may be said for the necessity of such constitutional restrictions under the American form of government, but none can deny the enormous difficulties which they throw in the way of consistent, simple, and wise tax legislation.

Use of Direct Taxes by the Federal Government. — Until the twentieth century, the constitutional limitations which we have been discussing served to concentrate federal taxation almost wholly upon consumption, since direct taxes when apportioned according to population have shown themselves to be unjust, unproductive, and exceedingly difficult of collection. Congress has made use of direct taxes only five times during the history of the national government. Two million dollars was apportioned in 1798; $3,000,000 in 1813; $6,000,000 in 1815;

excise . . ." and was invalid only because it acted enough like a direct tax in practical effect to be subject to the requirement of apportionment according to population.

$3,000,000 in 1816; and $20,000,000 in 1861. Except in the tax of 1798, Congress has always permitted any state to assume its quota and raise the money as it saw fit, although provision was always made for its collection by federal officers, in case the quota was not assumed by the state government. It would be difficult to exaggerate the unsatisfactory character of such taxation. In no case has the federal government ever collected the full amount of the tax. The taxes levied in 1814–1816 continued to be collected until 1839. The last payments on the direct tax of 1861 were not received until 1888; and in 1891 a law was passed abolishing further collections and authorizing the amounts which had been collected under the act of 1861 to be returned. Considerable scandal arose out of this refunding act, owing to the enormous commissions paid to certain lobbyists for their work at Washington in securing the passage of the law. Until the adoption of the sixteenth amendment, therefore, the federal government relied almost exclusively, in ordinary years, upon customs duties, excises, and similar taxes.

Customs Duties. — Among federal revenues, customs duties held the place of first importance until very recently. From the foundation of the federal government in 1789 until the Civil War, with the exception of a few excise taxes collected between 1791 and 1802, the federal government derived nearly all its permanent regular revenues from customs taxation, and since the Civil War considerably more than 50 per cent of the permanent revenue has, on the average, been derived from this source. From the very beginning, moreover, our customs duties have been in spirit, if not always in effect, protective; and it thus becomes necessary to consider the connection between the protective and revenue principles, in addition to the more strictly fiscal aspects of customs duties.

Protective duties are imposed in the hope of diminishing imports and substituting in their stead the products of home manufacturers. To the extent, therefore, that they are successful in their purpose, they reduce the customs revenues and justify the statement that there is a fundamental antagonism between the protective and revenue principles. However, the reduction of

importation does not signify that the consumers of the article in question are not taxed. So long as the price remains higher than it would be if no duty were imposed, the people are taxed to the extent of the difference, the proceeds of the tax going to home manufacturers in the form of an unmeasured, unregulated bounty, whose burden upon the taxpayers is no less real because unperceived.

It is equally evident that no protection is given unless the price is raised. The popularity of customs duties is largely explained by the belief that the foreigner can be made to bear the burden of the tax. He can in some cases, but not in the majority of cases. For the most part it is very certain that the burden must be borne by the home consumer. But whatever the extent to which the foreigner can be made to pay the tax, to that extent the tariff fails to replace foreign by home products; in short, fails to "protect." We cannot have our cake and eat it too. The more the protection or bounty to the home manufacturers, the greater the tax upon the consumers, the less the shifting of the tax to the foreigner, and the less the revenue to the home government. The protectionist is logically deprived of the time-worn argument that the foreigner foots the bill.

The European War has deeply impressed upon the people of the United States the strength of the argument for protection based upon military grounds and briefly discussed on page 370 above. It is likely, therefore, that we shall have more and not less protection in the immediately ensuing years, particularly for those industries whose products are believed to be indispensable to national security in times of war. So long as war is a real possibility there is probably no logical rejoinder to this argument for protection; but at least we should realize that we are paying for our self-sufficiency, and that the difference between the cost of the protected products and what they would cost if imported from foreign countries, represents an additional item in the budget of "preparedness" which has already reached colossal proportions.

The shifting of import duties may be best explained by noticing separately the immediate and ultimate incidence. (1) The immediate effect of the tax

will be to discourage certain foreign producers from shipping their products to the newly restricted market, and prices will tend to rise because of diminished supply. If the product is controlled by a foreign monopoly, the price may not increase; but where the foreign production take places under competitive conditions, and in most cases where the production is monopolized, the price will be raised. The increase of price may be more or less than or equal to the tax according to the readiness with which foreign producers find a new market, but in a large majority of cases the burden of the tax will be shared by the producer and consumer, the latter, according to the majority of authorities, bearing most of the burden. That the burden, however, is partially borne by the foreign producer accords not only with the best theory, but with the great interest displayed by exporters everywhere in the tariff legislation of foreign countries, and the sacrifices which protectionist governments are willing to make in reciprocity treaties for the purpose of obtaining advantageous terms for their own producers.

(2) Eventually, however, the initial increase in price may stimulate home production, and this can only take place when the increase of price is less than the duty, because if the price rises by the whole amount of the tax, the foreigner will still possess his initial advantage. If the home producer totally ousts the foreigner, then the consumer bears all the difference between the existing price and the price that would rule if no duty were imposed — although, of course, the treasury receives nothing. If the home producer secures only a part of the home market, it is plain that, under ordinary circumstances, the foreigner pays part of the tax, *i.e.* the amount per unit of product by which the duty exceeds the *increase of price;* while, as before, the home consumer pays, on every unit consumed, a tax equal to the difference between the old and the new prices. When, however, we attempt to go further and take account of the indirect effects of protection, the problem becomes almost hopelessly complex. Modern economists, however, are substantially agreed that the foreign producer bears a somewhat larger share of the average customs duty than the English economists of the first half of the nineteenth century were willing to admit.

From the standpoint of revenue, American customs duties have the great virtues of high productivity, convenience of payment, and cheapness of collection. Along with these important virtues are associated almost all the vices to which indirect taxes are subject.

1. The most important defects of our customs taxes are their *unreliability and uncertainty.* Historically, they have shown a pernicious variability, expanding when increased revenue spelt extravagance, contracting when the country sorely needed larger revenue. In 1791, for instance, the customs revenues exceeded

the total ordinary expenditures by over 41 per cent, while in the very next year they fell short of the expenditures by 58 per cent. Between 1791 and 1860 inclusive, the customs receipts actually exceeded the expenditures in thirty-four years; varied between 50 and 100 per cent of the expenditures in twenty-eight years; and fell below 50 per cent in eight years. In 1860, more than 84 per cent of the expenditures were secured from this source, but in 1863 less than 10 per cent, so inadequate is the customs revenue in a serious war when money is most needed. In 1864, Congress made desperate attempts to increase the customs revenue. In the tariff act of that year about fifteen hundred articles were enumerated, and the average rate approximated 50 per cent; yet the receipts dropped from something over one hundred and two millions in 1864 to less than eighty-five millions in 1865, constituting only 6.5 per cent of the total expenditures in the latter year. During the history of the national government, the customs revenues have varied with the industrial condition of the country, the prospects of peace or war, the power of the tariff lobby, the prosperity and commercial policy of foreign nations, but almost never in nice accordance with the financial needs of the federal government. Where the tariff is controlled by revenue rather than protective purposes, it can be made strikingly stable and responsive to the control of the treasury. "The English revenue from this source has kept very near £20,000,000 per annum for the last thirty years. In the period 1815–1895, it has only varied between £24,000,000 and £19,000,000, notwithstanding the extensive remissions of taxation." [1]

2. From the fiscal standpoint, our tariff system is far too *complex and cumbersome.* Whether we tax many imports or few, the major part of the revenue comes from comparatively few imports, so that by extending the list of dutiable articles we merely add to the cost of collection and increase the interference with commerce, without materially augmenting the yield of the tax. Before the European War, Great Britain imposed import duties on less than fifty articles, and nearly all of her revenue

[1] C. F. Bastable, *Public Finance,* p. 517 (written in 1895).

from import taxation came from five articles: tobacco, tea, spirits, wine, and sugar. Compared with direct taxes the cost of collecting our import duties is not excessive (4.42 per cent of the receipts in 1915), yet it exceeds the cost of collecting the internal revenue duties (1.50 per cent in 1915); and in some customs districts the expenses of collection actually exceed the tax collected.

"There is no better illustration of a complex and incomprehensible revenue system than the tariff legislation of the United States. It levies import duties upon goods that make up the country's exports as well as upon those that constitute the normal imports of the nation's commerce; it taxes raw material as well as the manufactured product, and the manufactured product itself is taxed at many stages in the process of its manufacture; the rate imposed is determined in part by considerations of revenue, in part by the desire to grant 'incidental protection,' and in part for the purpose of prohibiting the import of selected articles; the rules of rating are numerous, overlapping each other in many cases and resulting in a confusion of instructions that necessitates a board of appeal in continuous session; the text of the law makes a book of one hundred and fifty pages, while the law and its interpretation used by the officials as a guide in the performance of their duty is a volume of several hundred pages. A law of this sort cannot be comprehended." [1]

Customs duties are either *specific* or *ad valorem*. *Specific duties are laid in proportion to weight or number, without regard to value*, while *ad valorem duties are levied in proportion to the value of the commodities imported*. Ad valorem duties are open to the objection that they offer a greater temptation to fraudulent valuations, and hence make more difficult the work of the customs officers. Specific duties, on the other hand, while they can be more easily administered, are open to the serious objection that they impose a relatively heavier burden upon less valuable goods of any class. Owing to their greater ease of collection, however, such specific duties now play a larger part than ever before in our tariff system.

Internal Revenue Duties. — In 1915 the internal revenue taxes yielded $415,681,024, or practically twice as much as the customs receipts for that year. Of the total collections just

[1] H. C. Adams, *Science of Finance*, pp. 409, 410.

one third came from the tax on spirits; a little less than one fifth (19 per cent in each case) from the taxes on tobacco, fermented liquors, and incomes, respectively; a little less than one tenth from stamp taxes on documents and transactions; and the remainder from taxes on oleomargarine and playing cards, back taxes, penalties, and the like. The internal revenues now include a number of taxes other than the familiar excises on articles of consumption which for so many years constituted, with customs duties, the fiscal mainstay of the federal government; but these newer taxes will be left for separate notice and the remainder of this section confined to the excises on articles of consumption. Such excises are usually paid by stamps placed upon the package of sale, supplemented by license taxes upon dealers, which are also paid by stamps, as a rule, publicly exposed by the dealer in his place of business.

Excise taxes, like all taxes, have their grave defects. (1) Like import duties, they must be levied upon articles of wide consumption to be productive; and as they are in a large degree shifted to the consumers, they frequently weigh more heavily upon the poor than upon the rich. (2) This regressivity is increased by the fact that the taxes are specific, not ad valorem, so that the finer grades of domestic cigars, for instance, pay a lower rate of taxation than the cheaper goods. (3) In order to prevent evasion of the tax, the government is compelled not only to watch, but partially to direct, the process of manufacturing at every step. Producers are required to give bond for the faithful observance of the law, to register raw materials which they buy, and to keep records of the stock on hand in accordance with bookkeeping methods prescribed for them by the Bureau of Internal Revenue. Such interference with private industry is an unfortunate but necessary part of excise taxation. (4) Large systematized businesses bear such interference with less effort than small concerns, and in consequence our internal revenue system unquestionably exerts an influence in the direction of large-scale production, and possibly in the direction of monopoly. The license taxes particularly, which are adjusted only in the roughest way to the size of the business, unquestion-

ably weigh more heavily upon the small than the large dealers. (5) Finally, it seems to be the almost universal opinion of competent students that excise taxes exercise little influence upon the consumption of articles whose use is believed to be deleterious. An increased tax is as often followed by adulteration as by an increase of the price per unit.

The advantages of the internal revenue duties, however, far outweigh their defects. (1) Like the customs duties, they yield an enormous revenue; but although they do fall off somewhat in times of industrial depression, they are in ordinary periods regular and dependable, while in times of war they respond readily to increased rates. The increase of old duties and the imposition of new duties during the Spanish War, for instance, raised the receipts from $170,900,641 in 1898 to $273,437,162 in 1899. Many of the taxes yield a proportional increase almost as great as the increase in the rate of the tax, a rare virtue in excise taxation. (2) From the administrative standpoint they are very inexpensive to collect, give rise to comparatively little fraud or evasion, and the few industries which they affect have now become so habituated to public inspection and control that these are occasion of little complaint. (3) Finally, it is to be noted that although excise taxes are regressive, the burden of the tax is shared by producer and consumer — not borne wholly by the latter — and the share borne by the producer varies directly with the element of monopoly or differential advantage in production. "Viewed as a whole, the internal revenue system is the most satisfactory part of our entire financial structure, state or federal. Its returns are fairly steady and reliable in times of depression. Its growth is automatic. It is imposed on articles the demand for which is tolerably inelastic. Its burden is not perceptibly felt. It is honestly and economically collected; and finally, it is abundantly capable of yielding additional revenue, should an unforeseen emergency arise." [1]

Taxes on Transactions. — In times of urgent need, as in the War of 1812, the Civil War, and the late war with Spain, the federal government has imposed taxes upon various sorts of

[1] W. M. Daniels, *Public Finance*, p. 148.

transactions. Thus, the war revenue act of 1898 imposed stamp taxes on bank checks, telegrams, freight and express receipts, transfers of stocks and bonds, bills of exchange, etc. In 1899, the year after they were imposed, the stamp taxes yielded $43,837,819. Such taxes were again introduced in a period of declining customs receipts and increasing expenditures, by the so-called "war revenue act" of 1914. In 1915 this measure yielded a revenue of a little less than $38,000,000, of which $23,500,000 came from stamp taxes on documents and transactions and the balance from special internal revenue duties of the ordinary type. The peculiar advantage of taxes on transactions is their quality of immediate productivity. As the figures just quoted show, they may be made to yield largely the very year they are imposed. Moreover, the government may make evasion almost impossible by refusing to recognize documents not properly stamped in its courts, or by otherwise obstructing the use of unstamped documents as evidence. Another advantage is that they cost almost nothing to collect, as the taxpayer buys the stamp himself and places it upon the document. On the other hand, the general effect of such taxes is to impede business; and they are frequently if not usually shifted to the weaker bargainer in a business transaction. Certainly they bear no logical relation to the ability of the taxpayer to pay taxes.

Income Taxes. — The recent adoption of effective income taxation into this country affords an interesting illustration of the triumph of a sound economic idea over formidable obstacles. The legal barriers which had to be surmounted have already been mentioned, but there were other difficulties to overcome equally formidable. Income taxes had been on the statute books of American commonwealths since the seventeenth century, and had been consistently and continuously ineffective. The tax was generally believed to be too intricate and too inquisitorial for the American people, schooled by the crudities of the general property tax to evasion of and contempt for tax law. Expert opinion had come to hold that the income tax, though "sound in theory," made too many demands upon both the taxpayer

and the tax administrator to thrive in American soil. Yet in the last five years income taxes of the European type have been put into successful operation by both state and federal governments and give every promise of assuming, in the future, a place of major importance in the American fiscal system.

The mistake of the experts arose rather from an underestimate of the strength of the income tax than from an underestimate of its difficulties. The alleged weaknesses of the income tax were not imaginary. Experience has shown that it is a complex and difficult tax to formulate and administer. Just what items of gross income should be included and what losses, expenses, and other deductions allowed, are questions which bristle with difficulties. Some forms of income are not expressed in money and usually escape taxation; on the other hand, it is almost impossible to avoid double taxation, particularly in dealing with interest and dividends. The tax has also the difficulty of being a class tax: the federal income tax touches directly less than one per cent and the Wisconsin income tax less than three per cent of the respective populations affected. The tax is predominantly a city tax and farmers generally escape, owing to the facts that they usually do not keep books and that much of their income does not find expression in terms of money; although it must be admitted that relatively few farmers receive incomes above the exemption limit. Finally, the mixture of "withholding at source" and direct collection, in the federal tax, imposes large and unjust expenses of collection upon private taxpayers, complicates the administration of the tax, and in some cases leaves the taxpayer to become the sole judge of the taxability of certain items of income and of the deductibility of certain losses and expenses.[1]

Despite all these difficulties, however, the income tax has succeeded. It is reasonably productive and will become more productive as time passes: the federal income tax in 1915 yielded a revenue of over $80,000,000, and in 1916 it produced

[1] A criticism of the federal income tax by a disinterested and competent committee of the National Tax Association will be found in the *Proceedings* of that association, vol. ix.

over $100,000,000. It is elastic, and can be made more productive by simple increase of rates. Above all else, it realizes with reasonable success "taxation according to ability." Property taxes pay little attention to the ability of the owner of the property. They fall upon property as such whether it is free or encumbered by debt; they must be paid by the unsuccessful as well as the successful; in lean years as well as fat years. The income tax, on the other hand, does not affect the very poor at all; it spares the unsuccessful business, the new business in its developmental stage, and the old established enterprise in times of business depression. Its appeal is thus not only to the humanitarian sentiment of the age, but to the common sense of the business man. Except when collected at source (when it acts in small part like an excise) it is subject to little or no shifting. And, unlike the property tax, it grows stronger with age and continued use. The countries which have tried the income tax keep it; and in the last quarter of the century practically every large country in the world which did not already have the income tax has introduced it.

The mistake of the critics in condemning the income tax for American use was due very largely to a misinterpretation of the failure of the personal property tax. That tax is largely evaded. The critics inferred from this that American taxpayers are liars and would similarly evade an income tax. Experience with the income tax has shown, however, that the average American taxpayer is honest and will make an honest declaration if the tax be equitable and tax officials at the same time firm, competent, and considerate. The personal property tax in this country has failed, not because the taxpayer is dishonest, but because the tax is at times barbarously severe in burden, strikingly unequal in operation, and administered by officials who are frequently incompetent and out of sympathy with the tax itself. Moreover, the income tax is no more complicated than any other direct tax involving valuation and assessment. It appears to be more complicated than the property tax merely because in drafting income tax laws it is customary to anticipate all problems of detail and define the proper answer in the

statute itself; whereas, in property tax laws almost all the difficult questions are avoided by laying the tax on the "fair cash" or "market value" and leaving the meaning of this term to be decided by the judgment of the assessor. In the average case, it is easier to determine a man's income with reasonable accuracy than it is to determine with the same degree of accuracy what his property is worth.

Absentee ownership increases with industrial development, and much income is now derived from particular jurisdictions by persons who reside elsewhere. This leads in practice to double taxation, as both the jurisdiction in which the recipient lives and that in which the income originates are likely to impose the tax. Such double taxation is reduced as the jurisdiction is enlarged to which the income tax applies; and for this reason many authorities advocate the exclusive employment of the income tax by the federal government. If the income tax cannot be employed by both state and federal governments, this conclusion is warranted. But we see no reason why the states should renounce the income tax and use substitutes which are manifestly inferior, merely because the federal government is employing the same tax. Nearly all taxes must be paid out of income. The specific tax employed is merely a device for distributing the tax. Why, then, should the state employ a poor method of distribution, such as that embodied in the personal property tax, when it might employ a tax which with substantial accuracy lays the burden in accordance with ability to pay? As a matter of fact, the federal income tax is likely to encourage the adoption of state income taxes, because the federal tax familiarizes the people with income tax procedure, and with simple modifications a report prepared for the federal government can be used for the state government. We should have, not hostility between state and federal administrations, but joint and coöperative use of many forms of taxation.

Inheritance Taxes. — In 1893, when the first edition of this work was written, the inheritance tax was used in only five states, and so strong were the objections to its wide adoption that the author felt called upon to point out that unregulated

collateral inheritance was an unjustifiable survival of the clan system that was being carried to ridiculous lengths at that time. Since that time, however, inheritance taxation has spread rapidly, being employed in about forty states in 1915, and with the spread of the tax has come a most significant development of progressive rating and taxation of direct as well as collateral heirs. Today one never hears of the "inherent right" of decedents to control absolutely the disposition of their property in perpetuity, and the right of the legislature to regulate inheritance in behalf of the general social welfare is hardly disputed. Mr. Andrew Carnegie, for instance, advocates a rate of 50 per cent upon the estates of millionaires.

At present the inheritance tax produces substantial revenues in only a few states; in 1913, the latest year for which complete statistics are available, 35 states showed collections aggregating $26,470,964, of which the six states of New York, Pennsylvania, Massachusetts, California, Illinois and Connecticut received 78 per cent. The important fact is that the initial inertia and opposition have been overcome and the ground cleared for the really efficient use of this tax as a means of reducing large fortunes and increasing public revenues. The new type of the inheritance tax is well illustrated by the Wisconsin law, which applies to direct as well as collateral heirs, and which graduates the rates according to relationship and the amount of the individual share, and not by the size of the estate. The highest rate in the Wisconsin tax, applying to shares in excess of $500,000 given to distant relatives and strangers, is 15 per cent.

Great as our progress has been in this respect, our legislation still falls short of the demands of common sense. Why should collateral inheritance, apart from a will, be permitted at all except among near relatives? Why should third cousins inherit from one another unless money is left by will? Are third cousins nearer to one than the town or city in which one has lived and where one has been able to acquire a fortune? The extent to which intestate collateral inheritance is carried is a survival of the sentiment of the time when people lived in clans, and is illogical in our day. Right and duty should be coördinated.

Ought I to be compelled by law to support an uncle who is unable by incapacity to earn a livelihood? Then I should inherit from him; otherwise it does not seem clear that I should unless he leaves me property by will. So far as practicable the circle of legal duties ought, however, to be extended so as to include the circle of vital relationship. The property should go to the State in the absence of near relatives when no will is made. The clan is dead and forgotten; ordinarily there is neither acquaintance nor recognizable obligation between second cousins, not to mention twenty-second. Inheritances thus bestowed are pure gifts, wanton disturbances of existing abilities to use property. *The modern clan is society, and to it belong all claims to inheritance falling outside the circle of vital relations.* The enlightened English jurist, Jeremy Bentham, wished to restrict inheritance and extend escheat, and thus abolish taxation altogether, but this is going too far.

At present the inheritance tax in this country is too light to satisfy the requirements of sound inheritance taxation. The average inheritance tax, even in the case of large estates divided into large shares, is less than 3 per cent: and it is very difficult for one state to increase the rates if neighboring states do not do the same. Moreover, state inheritance taxes give rise to multiple taxation. Land devolves at situs, and its devolution is taxed at situs. But our most valuable land is rapidly passing into corporate ownership, and corporations do not die. The corporate securities which represent the land are, under the inheritance tax, normally taxed at the domicile of the decedent. This is likely to be in another state. Hence many states, the western states in particular, try to tax not only the transfer of securities owned by resident decedents, but also the transfer of securities "representing" property located within their borders. This is selfish and inconsistent. Both principles cannot find an equitable and logical place in the same tax law. But it is expensive and difficult to administer an inheritance tax on the "situs principle"; and when a holding company or series of holding companies intervenes between the security and the tangible property which that security repre-

sents, it is almost impossible. Other states, again, tax the transfer of securities held in trust companies located therein; while still others pile inconsistency upon inconsistency by giving bonds issued by their municipalities a situs within their own borders, in order that the transfer of such bonds may be taxed upon the death of their nonresident owners. The writer has known one block of securities to be taxed in three different states, and it was possibly taxed later in a fourth state.

Under these circumstances, many people advocate as a remedy the collection of the tax by the federal government, with a redistribution of a part of the proceeds to the state governments. The principal argument for this change is the assertion that the federal government can, while the state governments cannot, realize the full possibilities of inheritance taxation, so that the federal government can give the states more than they are now receiving from this source and still retain a handsome revenue for federal uses. This project is, however, deeply resented by state tax officials, who point out that the probate courts, the natural machinery for administering inheritance taxes, are in the hands of the state governments, and that there was considerable evasion of the inheritance tax adopted by the federal government during the Spanish War.

We believe that the solution of the problem lies in coöperative and joint use by federal and state governments. Neither division of government can be prevented from using this tax, and fiscal necessity will almost certainly force the federal government to make use of it in the near future. That being the case, common sense points to the desirability of administrative cooperation, and the elimination by the larger sovereignty, if possible, of double taxation arising from conflicts of jurisdiction.

State and Local Taxation

General Property Tax. — The key to the revenue system of our state and local governments, and by far the most important tax collected in the United States, is the general property tax, which supplied, in 1902, 82 per cent of the tax receipts of the

state and local governments and 51 per cent of all taxes collected in the country, (1) national, state, and local. The most important characteristic of this tax is suggested by the word "general," — *the tax is levied in principle upon nearly all property, real and personal, in the hands of the people.*

Though the administration of the property tax differs in many details among the states, it is the usual custom for assessors in each community to prepare complete statements of all kinds of taxable property owned by the people of the community. In some states the assessors receive from all residents sworn "lists" of property owned and subject to tax. By the terms of the law the property is supposed to be rated at its true full value, though, by the acknowledged practice of assessors and courts of review, the real rates vary widely from state to state, from community to community, and from individual to individual. On the basis of the property valuations thus made the state and local governments levy direct taxes at a rate fixed from year to year according to fiscal needs. The tax is then collected by local officers, and of the whole amount the portion levied by the county and state is passed on to the designated officers after each minor political division has set aside its share.

As yet few economists who have written upon the subject, and few state officers who have had to do with the administration of the tax, have ever been able to speak of it except in terms of the severest condemnation. Naturally, then, there is now a strong tendency to work away from this form of taxation. Some of the many serious faults which the general property tax has everywhere shown call for comment and explanation.

1. *Unjust Apportionment.* — The first of the defects of the tax appears in the apportionment of the state's share of the tax. Each community has a narrow, selfish interest in reducing its assessment so that it may escape its just share of the tax. The same mean struggle is especially frequent between city and country districts. To correct the evil, boards of equalization are usually appointed, but experience has shown that such boards usually do their work in a most perfunctory way. Although earnest study of assessments may and sometimes does secure a

substantially just apportionment between county and county, this equalization does not correct the glaring inequalities within particular counties, and even within single assessment districts.

2. *Inequality as between Realty and Personalty.* — In the second place, the general property tax has proved grossly inequitable in laying an undue proportion of its burden upon real property, allowing various forms of personal property to escape with a slight tax or with no tax at all. A secondary result of this inequality is that the rural districts bear a disproportionate burden, since the greater part of the tax-escaping personalty is owned by the wealthy citizens of our cities.

3. *Undervaluation of Large Properties.*— Very similar to the preceding evils is the further injustice wrought by the tax through the disproportionate assessment of large and small properties. Thus, an investigation in Virginia covering over sixteen thousand pieces of property, showed that while the average ratio of assessed to true value was 33 per cent, parcels worth less than $500 were assessed at 47 per cent of full value, and parcels worth more than $10,000 at only 28 per cent of full value.[1]

4. *Temptation to Dishonesty.* — It follows from the evils already described that the general property tax leads to a shocking amount of dishonesty, perjury, bribery, and other forms of corruption. Indeed, as one writer has expressed it, "The general property tax has gone far toward making perjury respectable and even virtuous."

5. *Fundamental Theoretical Defects.* — But the most fundamental defect of the general property tax is found in the fact that it is an incongruous mixture of *real* and *personal taxes*. Real estate, in a great majority of states, is taxed at its situs, irrespective of ownership or the tax-paying ability of the owner. The personal obligation of the owner to support the government under which he immediately lives is met practically everywhere by that part of the tax which falls upon personal property, personal property paying at the domicile of the owner.

This distinction between real and personal property is artificial,

[1] *Report of the Joint Committee on Tax Revision* (Virginia), 1914, p. 101.

inequitable, and illogically applied. Personalty, as a measure of ability to pay taxes, ought to be accurately computed by offsetting liabilities against assets, so that the taxpayer would pay only upon net assets. Yet no state, with the possible exception of New Jersey, grants full and complete exemption of debts; only three states permit a subtraction of debts from all personalty; the rest either refusing any abatement for debts whatsoever or limiting the abatement to subtraction of debts from money, or money and credits, or other restricted classes of personalty. Moreover, nearly all the states manipulate their definitions of real property in the most discreditable manner, causing many kinds of double taxation. To take a single illustration: most states tax the stock of foreign corporations held by resident citizens, whether the corporation pays full taxes at its situs or not. Many of these states tax their own or domestic corporations at full value, thus indorsing the theory that a corporation should be taxed as a business unit where the business is carried on. Nevertheless, they attempt to tax the stock of foreign corporations when the stock is the only thing they can reach. Some states, though not a majority, actually tax both the shares of stock and the business of domestic corporations, and then wonder that the stockholders attempt to evade the inequitable obligations imposed upon them by law.

Reform of the Property Tax. — This brief outline of the evils connected with the general property tax furnishes us with the key to reform. By far the greatest reform that could possibly be accomplished would result from placing the work of assessment on a scientific basis, by appointing expert assessors under civil service protection, who would give their whole time to the business and hold their places during good behavior. In 1902 practically three fourths of the revenues collected under the general property tax came from the tax on real property. We shall undoubtedly keep the real estate tax. Scarcely any one advocates its abandonment or believes that it will be possible to get along without it; and with trained assessors it would be possible to make a substantially fair assessment of real property. Yet even the assessment of real estate is in most places today

markedly unequal. We spend a great deal of time thinking out ambitious fiscal reforms that will remedy the present system by revolutionizing it, overlooking the fact that the remedy for the deepest and widest evil lies within our reach, neglected and unavailing, not because we are ignorant of its potency, but because we lack the will resolutely to apply it.

At the same time, no assessor, however expert and well paid, can ever be expected to assess all kinds of personal property with even approximate accuracy. To persist in the attempt to assess all the property of every person is simply to debase public morality and convince assessors that nothing short of divine wisdom will enable them to satisfy the requirements of the law. In short, the more intangible forms of personal property, if not all personal property, must be exempted from taxation, and the loss be made up by the introduction of simpler and more workable taxes. Probably the best substitute is an income tax, or what has been called a " presumptive ability tax " based upon house rent, rental value of business premises, salary, or all of them. In individual cases such a tax would violate the rules of exact justice, but with suitable exemptions and proper adjustments it might be roughly equitable.

The personal property tax on business and commercial concerns, with its impossible requirements of stock valuations, taxation of book accounts, bills receivable, and credits generally, should be replaced by a tax on gross or net income, or by some simple form of license taxation. We should then have, in place of the general property tax, a tax on real estate, a business tax, and a personal tax measured by net income or evidences of income. Although the real estate tax would in appearance take no cognizance of mortgages or debts secured by the property and no account on the surface of the ability of the owner, it would not in reality wholly violate the canon of taxation according to ability. The man buying land on contract or subject to a mortgage, would take into account the fact that he would be called upon to pay taxes upon the whole value of the property, irrespective of debt or incumbrance, and the price would be adjusted accordingly. Or, if he mortgaged his land after he

had acquired ownership, he would be indemnified in most cases for paying all the taxes, by receiving a lower rate of interest on his mortgage than he would be enabled to secure if the creditor were liable for taxes upon that part of the property covered by the mortgage. Real taxes, which take no cognizance of the financial status of the owner, are not inequitable when they are consistently applied and supplemented by a separate system of personal taxation.

All these taxes destined to take the place of the general property tax may possibly, in the future, be assigned to the local governments, although administered in some cases by the central government. If necessary to provide enough revenue for the state, however, a small state tax could equitably be levied upon real estate, as the equalization of real estate assessments among the larger governmental divisions, such as counties, is a comparatively easy matter. Whether the state will be able to get along without taxes upon real estate, depends principally upon the productivity of certain corporation taxes, the proceeds of which belong logically to the state rather than to the local governments. This absorption of corporation taxes by the state is already well under way in the New England and Middle Atlantic states. In 1915, for instance, New York, New Jersey, and Pennsylvania together raised $70,078,685 from special property and business taxes (practically corporation taxes), but only $18,743,626 from the general property tax. In that year Delaware made no use of the general property tax at all for state purposes. However, the breakdown of the general property tax has by no means been accomplished yet. In all the states and territories in 1915, 51 per cent of the total tax receipts came from the general property tax, 23 per cent from special property taxes, 22 per cent from business taxes, less than 1 per cent from poll taxes, and something over 4 per cent from miscellaneous licenses. These proportions are based upon state receipts. If local revenues were included, the general property tax would appear much more important.

Corporation Taxes. — The exact way in which any corporation should be taxed depends upon a great variety of considera-

tions, which vary from place to place and from time to time. In general, however, the following elements may be detected in the more progressive systems of corporation taxation: (1) The incorporation fee, justified by the clerical expenses of registering corporations and the value of the privileges granted to every corporation, the most important of which is that of limited liability. This charge should be imposed on all joint-stock companies, should vary with the amount of bonds as well as the amount of stock authorized, and should be small, unless the state desires narrowly to restrict the incorporation of commercial enterprises. (2) The franchise tax proper, to cover especially valuable privileges, such as the right to use the public streets or highways, granted to most public utility companies. This is essentially a contractual payment, a lease or royalty rather than a tax. It should be fixed in advance for a definite period at as high a figure or rate as is just, and, when fixed, should not, in justice to the corporation, be tampered with by the state.[1] In states having public service commissions powerful enough to control rates *effectively*, this tax or payment may, and perhaps should, be relinquished in favor of correspondingly lower rates and better service. (3) The general property tax or some equivalent, designed to impose upon the corporation a burden equivalent to that borne by the average taxpayer of the district. Inasmuch as good will, business organization, and similar intangible assets are property, property taxes imposed under this head should cover not only tangible but intangible values as well, including the franchise, when this does not revert to the state. Corporations which have received valuable franchises from the state may properly be called upon to pay *for the privilege* (under 2) as well as *upon the privilege* (under 3).

This differentiation of what may be called the bases of corporation taxation should not be misunderstood. Many states merge two or even three of these charges in a single tax, and

[1] However, where a long or perpetual franchise is given, provision should be made for the readjustment of the rental by arbitration or in some other equitable way. An illustration is found in the terms of the franchise under which the Pennsylvania railroad built a tunnel under the North River and erected its new station in New York City.

other states exempt savings banks, insurance companies, and other kinds of corporations from one or all of these obligations in order to encourage thrift or foster the industry exempted. Such exemptions are often justifiable and socially helpful. But unless these separate elements are kept plainly in mind, injustice is almost sure to follow. To impose, or try to impose, charge (2) upon all corporations, on the theory that all of them have received exceedingly valuable privileges, is to confuse general with special corporation privileges, and to pave the way for "corporation-baiting." Finally, although it is not necessary, we believe real progress will be hastened by observing these distinctions in practice as well as in theoretical analysis.

Business and License Taxes. — In most Southern states there is an extensive system of business licenses, which supplement and partly replace the general property tax. The significance and importance of these business licenses have not hitherto been sufficiently appreciated. They are levied in theory under the regulative power of the government rather than the taxing power; but they have by extension and multiplication become taxes for the most part, as distinguished from sumptuary charges or payments for small privileges.

The license system of the South is characterized by many defects. Here and there traces of class feeling are discerned, as in the prohibitive license taxes levied upon peddlers; and the rates employed are often illogical, inconsistent, and inequitable to the point of absurdity. In a few cases also, these taxes are high enough to bar certain occupations to the man with small capital. But on the whole they are among the best taxes employed by American commonwealths. They are easily and cheaply collected, very productive, cause little or no complaint, are not excessive as a rule, and exercise little or no influence upon prices. And in so far as they discourage the excessive multiplication of small retail shops they perform the useful service of preventing almost inevitable loss and bankruptcy.

The great significance of the business license is its expression of the truth that the general property tax in its crude form is

unsuited to the taxation of business. Under the property tax, business in general is taxed upon its tangible assets, *i.e.* fixed plant and stock. One has only to think of the varying relationship to taxable capacity of the plant and stock of a manufacturer, a grocer, a druggist, and a stock broker, to realize the grave injustice of this method of taxation. In countries of continental Europe, and in parts of Canada, as in the southern part of the United States, a wide and generally satisfactory use is made of the business tax. Eventually we shall probably come to the same thing in all parts of this country. But the tax should be adjusted to earnings or profits in a more effective way than is now done in the South.

Poll Taxes. — The poll tax is the oldest tax we have in this country, and throughout the greater part of the colonial period yielded more than any other source of revenue. It aroused bitter opposition in many commonwealths and was prohibited by the liberal constitution of Maryland at the beginning of the Revolutionary War; but it persisted in many of the states, and still remains the most important source of revenue, after the property tax, in a few of the Southern states. The tax still stands on the statute books of about one half of the states, and is nominally employed as a highway or local tax in a still larger number of commonwealths; but in many places little or no effort is made to enforce it. In Wisconsin, for instance, no attempt is made to collect the poll tax in more than half of the local taxing districts. The poll tax is not only difficult to collect, but is regressive and, when its payment is required as a prerequisite to the exercise of the suffrage, often results in widespread political corruption. "No concealment need be made of the fact that the poll tax is used in Mississippi as a means of disqualifying the negro in national elections and controlling the vote in local elections." [1] The aggregate yield of the poll tax is small, and the expense of collecting it is relatively high. It has few defenders among competent students of taxation.

[1] C. H. Brough, in "Studies in State Taxation," *Johns Hopkins University Studies in Historical and Political Science*, vol. xviii, p. 213.

A Balanced Revenue System

There are, on the mainland of the United States, forty-eight separate sovereignties in addition to the federal government, and the resulting conflicts of jurisdiction gives rise to the deepest defects of our revenue system. As a remedy for this evil, many authorities recommend a division or separation of revenues, by which certain taxes would be assigned to the federal government, others to the states, and still others to the local governments. This plan is usually referred to as the " segregation or separation of the sources of revenue."

The benefits that might be derived from a thoroughgoing system of segregation are many and obvious. But the trend of events suggests that reform must, in the main, be sought along other lines. The boundaries between state and federal finance become more indistinct with the passage of time. Both federal and state governments have recently adopted income taxes, and the federal government may very soon deem it wise to adopt the inheritance tax. The state governments in recent years have made increasing use of stamp taxes and other forms of excise taxation theretofore used almost exclusively by the federal government. In commonwealth finance, similarly, there seems little disposition to separate clearly the sphere of state and local taxation. On the contrary, state tax commissions are being given increasing powers of regulating local taxation, and it is being recognized in increasing degree that to finance the state governments by corporation and indirect taxes which do not touch the great mass of citizens directly, stimulates extravagance on the part of the state legislature, and, in fact, leads to the reintroduction by the state of direct taxes on general property. Furthermore, there are some manifest advantages in the joint use of the same tax by several divisions of government. The central or larger jurisdiction not only finds it possible to employ expert aid, which the local government could not afford to hire, but it has a broader, more impartial point of view which serves to check local selfishness. Local authorities, on the other hand, frequently have a helpful knowl-

edge of important facts and conditions which are likely to escape the agents of the central government. Joint use of the same tax also permits a wise compromise between central efficiency and the American demand for "local self-government."

A certain amount of segregation is, however, not only expedient but plainly necessary. Thus, the use of import and export duties is confined by the constitution to the federal government. In the domain of commonwealth government also there are certain enterprises, such as sleeping car companies, whose property or business is so difficult to localize that by common consent such companies are reserved for state taxation. For the same reasons, certain other corporations, such as telephone, telegraph, insurance, freight line and equipment companies, should be, and rapidly are being, set aside for state or central taxation; and in the case of most "state-wide" public utilities there is obvious need for central assessment. In the past, it was common to assess separately the property of railroads and similar public utilities in every tax district (including townships and even school districts) in which they operated, and this absurd *morcellement* is still practiced in some backward states, including New York. Many of the most important properties of such corporations cannot be intelligently valued without reference to the earnings or success of the business as a whole and this, as well as considerations of administrative simplicity, makes valuation or assessment as a unit obviously desirable. When the central valuation is once made it is possible in some cases to distribute or apportion the valuation to counties or other large local subdivisions; but it is impossible to localize some businesses satisfactorily, and minute subdivision is in all cases undesirable.

Much that has been said above about state versus local assessment applies, in the case of interstate corporations, to the question of federal versus state assessment. Without federal control each state is tempted to select that form of taxation and to adopt that method of dividing or allocating corporate property and business for purposes of taxation which is most beneficial to itself. Under such circumstances some interstate cor-

porations are taxed upon more than one hundred per cent of their property or business, while others take advantage of the absence of authoritative central control to assign, in their own accounting systems, excessive proportions of property and business to those jurisdictions in which taxes are lightest.

While federal regulation is justified by the same logic which sanctions state regulation of local taxation, it is very doubtful how far federal regulation can or should go. If the national government should require some form of federal incorporation for companies engaged in interstate commerce, it is possible that it would have power thereafter to prescribe the methods by which such interstate companies should be taxed under state law. This has been done in the case of national banks, although the power of the federal government to control taxation of national banks is clearer and probably greater than its potential power to limit the rate of taxation of ordinary business corporations engaged in interstate commerce. But if the proposed federal regulation were elastic enough to permit the rate of taxation to vary in each state with the average level or burden of taxation in that state, and vigorous enough to suppress selfish state aggrandizement, it would represent a great reform. No form of federal control is expedient, however, that would deprive the states of adequate revenues from this source. The properties of interstate companies form a very large part of existing wealth. In a number of states one tenth or more of the entire taxes collected, state and local, come from railroad companies alone. Commonwealth revenue systems are adjusted to this condition and no revolutionary change is either practical or desirable.

One important reform, however, could be accomplished at once. The Interstate Commerce Commission, or some similar federal agency, should at the earliest practicable date be directed to formulate and enforce some simple plan of allocating the revenues and expenses of interstate corporations to the several states in which they operate. This is required not only for the fair assessment of state income taxes, but for the valuation of the properties of interstate corporations, as these properties can

never be satisfactorily appraised without taking their earnings into account.

For reasons which appear in the preceding discussion, it would be misleading to formulate any clear-cut division of taxes among the federal, state, and local governments. A few forms of revenue will unquestionably be reserved for the use of one branch of government, but the pressure of increasing expenditure is likely to force a joint use of such major revenues as taxes on real estate, income and inheritance taxes, excise and stamp duties; and for these the ideal is joint administration, in which the relative impartiality and vigor of central administration may be supplemented and perfected by the more intimate knowledge of local officials.

QUESTIONS

1. Why are the terms "direct" and "indirect" taxes particularly vague and equivocal?

2. Explain why no protection is given the home producer when the import duty is shifted upon the foreigner.

3. What is the greatest fiscal defect of American customs taxation? Can this defect be remedied?

4. Are excise taxes ethically justifiable? Do they materially check consumption when imposed upon alcoholic beverages and tobacco?

5. Do you know of any state which levies an income tax at the present time? Is the tax successful?

6. Should income which is saved and immediately reinvested be taxed? Is it not double taxation to tax savings and the earnings from such savings as well?

7. Should corporations be taxed at the same rate as unincorporated business concerns? Should any definite relation between the two kinds of taxes be maintained?

8. Contrast the taxation of national banks in your own state with the taxation of trust companies, ordinary commercial or manufacturing corporations, and unincorporated business concerns.

9. State as many reasons as possible why the separation of state and local revenues would be helpful.

10. Explain why many forms of property employed in business cannot be intelligently assessed for taxation without reference to the earnings of the business.

11. Are assessors elected or appointed in your own state? Do they require taxpayers to declare their personal property in great detail? Do the

local assessment rolls contain separate figures for real estate and improvements? Is the property of nonresidents specially designated?

12. Why is the general property tax particularly unsuited to the taxation of business and professional men?

13. Should the federal government, if it possesses the power, make the taxation of interstate commerce corporations uniform throughout the United States?

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APPENDIX A

HISTORY OF ECONOMIC THOUGHT

Economic Ideas in the Ancient World. — The assertion is sometimes made, or at least the impression is frequently given, that there were no writings on economics before Adam Smith. This impression is erroneous, and derives its plausibility from the fact that before Adam Smith economic subjects were treated either disjointedly and in a monographic way, or else in connection with ethics and political philosophy. But in treating economics in connection with ethics and politics, the older writers were merely following an instinctive method of dealing with economic truths, to which in a certain degree later writers are returning. Indeed, if we are to derive the utmost possible benefit from this brief survey of the development of economic thought, it is necessary to begin many centuries before Adam Smith, with the Greeks.

The Greeks. — The three writers among the Greeks most interesting to the economist are Plato, Aristotle, and Xenophon. Both Xenophon and Aristotle (or, more probably, some unknown disciple of Aristotle) have treatises upon the specific subject of Œconomics, but these are devoted principally to domestic economy, or the management of the household; and the more important economic ideas of the Greek writers are derived from their works which deal primarily with political and ethical subjects.

Plato describes a utopia in his *Republic*. His aim was to picture an ideal society in which the ills of society were to be corrected by a communistic State, and he included a communism even of wives and children, going farther than modern communists. The communism of Plato admitted, strange as it may seem, slavery, on which his social superstructure indeed rested as a base. The *Laws* of Plato is a more practical work. It aims to present not the best possible state, but a more practicable one, and deals to a greater extent with existing institutions.

Aristotle's principal work for us is the *Politics*, and it is indeed one of the most remarkable books in the world's history. Its influence is strongly felt today, for it was carefully studied by theologians of the Middle Ages, and through them entered into the thought and life of their time; and the thought and life of their time can be seen by the careful student to have entered in a thousand ways into the institutions of the twentieth century.

While Plato tacitly accepted slavery, Aristotle actively defended the institution of slavery, describing the slave as an "animated

tool," and insisting that slave labor was necessary in order that the ruling classes might have the leisure for statecraft, art, and literature. Both Plato and Aristotle, also, fully appreciated the advantages of the division of labor, and understood, in consequence, that a certain amount of traffic and exchange is necessary. But both writers shared the common prejudice against trade and commerce; what one man gained in exchange, they thought, some other man lost; and to live by trade was in their eyes despicable. Aristotle, moreover, defended the institution of private property, and formulated surprisingly accurate ideas about money and its functions; but he condemned interest taking because, as he expressed it, money is barren.

Perhaps the most characteristic quality of Greek economic thought, speaking generally, is the thorough subordination of economic to ethical and political considerations. The object of life, in their view, was self-knowledge or self-realization, not the acquisition of riches, and they refused to regard wealth as an object of fundamental importance to either the individual or the State. Plato, indeed, in certain parts of his writings, defends the ascetic idea that human wants are to be satisfied, not by the improvement of productive processes, but by the repression of the wants themselves.

The Romans. — While the economic institutions of the Romans and the manifestations of their character in their economic life will repay investigation, they were not remarkable for independent thought. Their economic ideas, like their philosophical doctrines, were borrowed from the Greeks, and show the same general characteristics which the ideas of Plato and Aristotle do. Commerce and trade were held in contempt, particularly when carried on in a small way. Interest taking was by some thought to be "as bad as murder." Agriculture, on the other hand, was esteemed to be worthy of the noblest citizens, and a "return to the soil" in later Roman times was frequently recommended as a cure for the prevailing degeneracy. Pliny said the great estates, the *latifundia*, together with slave labor and the destruction of the small independent farmer, caused the downfall of Rome. Among other agricultural problems discussed by the Romans were those of intensive versus extensive culture, and slave versus free labor.

The jurists are, however, the most important of all. Whatever may be its imperfections, the Roman law, the *corpus juris civilis*, is the most remarkable legal system the world has ever seen and for training in careful and accurate statement is unsurpassed. Probably, as a training for economic studies, Roman law is among the most valuable branches of learning. It gives us also invaluable information about the economic institutions of Rome.

Christianity. — To the economic thought of the time Christianity brought the revolutionary ideas of the dignity of toil and the equality of men before God. The philosophy of the Stoics had brought analogous ideas to the attention of the restricted intellectual world of the day, but Christianity popularized these ideas. The

clergy were encouraged to earn their livelihood by manual labor, and laymen were exhorted to free their slaves as soon as they had become Christians. With respect to money and trade, however, the effect of Christianity was to strengthen and impress the teachings of Aristotle.

The Middle Ages. — As the power of the Church increased, its economic ideas found more formal expression in the treatises of the schoolmen and medieval theologians who expounded the church or canon law. Indeed, in the *corpus juris canonici* we have a definite system of economic thought which, while it was largely theoretical and intended originally for the ecclesiastical courts, came in time to be widely applied in secular affairs through the power of the confessional, the pulpit, and the wide jurisdiction of the ecclesiastical courts.

The doctrines of the canonists were derived, in part, from biblical injunctions against usury and the pursuit of wealth. The early Christian fathers frequently went so far as to condemn private property and set up the ideal of communism among the faithful. But this was only an ideal, and private property was early recognized as a necessary evil resulting from the fall of man. This ideal, however, was powerful enough to keep alive the doctrine that the maintenance of the poor was not a matter of philanthropy, but a binding obligation, in the words of Thomas Aquinas, the most distinguished canonist, a *debitum legale*.

Following the philosophers of Greece and Rome, and in sympathy with the scriptural attitude toward wealth, trade and commerce were regarded as greatly inferior to agriculture and handiwork as a source of livelihood. It was still believed that what the seller made by trade the buyer necessarily lost. As commerce developed, however, trade had to be recognized by the Church. In doing so, the canon writers formulated the doctrine of *justum pretium*, that every commodity has a *just price*, or value, which it is sinful for the seller to exceed. The modern trade-union doctrine of a *fair wage*, and the decisions of our courts concerning reasonable charges for gas, railway services, etc., illustrate the permanent necessity of ethical ideas of this sort.

The next most important economic doctrine of the canonists was the condemnation of usury, which originally signified any loan interest, and not necessarily excessive interest. Their argument against interest was based upon scriptural strictures against usury, and upon Aristotle's argument that money is barren. Interest taking by the clergy had been prohibited as early as the fourth century; but in 1311, at the Council of Vienna, interest was prohibited "absolutely and universally," regardless of the civil law; and by the middle of the fourteenth century, the prohibition of interest had, in many places, been incorporated into the civil law. Little by little, however, the Church was forced to change its attitude, and in the middle of the sixteenth century (1545) a statute was passed in England legalizing an annual interest rate not in

excess of 10 per cent.[1] By this time the teachings of the canonists were fast giving way to the doctrines of mercantilism.

Economic Ideas in Modern Times. — Before the close of the sixteenth century, the temporal power of the Church had been undermined by the development of the great modern monarchies, and in economic thought religious considerations were replaced by political necessities. The problem of the Church — the universal establishment of the Kingdom of God upon earth — gave way to a newer problem — the maintenance and aggrandizement of rival states. The latter were in pressing need of ready money with which to build navies and support armies. How to increase public revenue and national wealth became the absorbing questions of the time.

Mercantilism. — The mercantile system, also called Colbertism, restrictive system, and commercial system, obtained from the early part of the sixteenth century until late in the eighteenth century, and its influence is still felt. Mercantilism is not, strictly speaking, the product of a school of political economists, but rather the name given to that economic policy of statesmen and to those detached economic views of writers which prevailed during this period. Most prominent among the statesmen who were mercantilists may be named Colbert, of France, Frederick the Great, of Prussia, and Cromwell, of England. Serra, an Italian, early in the seventeenth century presented a moderate and systematic statement of their views in a work entitled *A Brief Treatise on Causes which make Gold and Silver abound where there are no Mines.* Thomas Mun, in England, a generation later, wrote a valuable treatise from the standpoint of the mercantilists, called *England's Treasure by Foreign Trade: or the Balance of our Trade the Rule of our Treasure*, while Sir James Steuart's *Inquiries into the Principles of Political Economy*, published in 1767, may be regarded as closing the development of the theory of mercantilism.

The principal characteristics of mercantilism — the efforts to increase the stock of precious metals within the country, to maintain a favorable balance of trade, to increase the population and foster manufactures, if necessary at the expense of agriculture — have been described elsewhere, and need not be repeated at this point. In attempting to apply these theories, however, the statesmen of this epoch instinctively turned to that instrument — the law — with whose use they were most familiar, and statutory restrictions were multiplied until mercantilism in one sense became practically synonymous with governmental interference. Toward the end of the eighteenth century, however, the commercial position of England, for example, became so strong that many of her industries found themselves crippled and confined by the very laws which had protected their infancy, and a reaction against mercantilism set in. The reaction, naturally, took the form of a movement in favor of agriculture and against governmental interference in economic and industrial affairs. In obedience to the needs of a new

[1] See also p. 493, above.

epoch, political economy lent itself to a propaganda in support of the doctrine of industrial liberty.

The Physiocrats. — The reaction against mercantilism found its first thorough and scientific expression at the hands of the French physiocrats. Quesnay, a physician, Gournay, a merchant, and Turgot,[1] the statesman, are their three principal authors. Politically, the physiocrats taught the doctrine of natural laws and rights, and as a consequence loudly proclaimed the maxim of *laissez-faire*, that is, that the government should not interfere with private enterprise. Economically, they exalted the importance of agriculture, and maintained that manufactures and commerce, which merely change the form or position of raw materials, are barren and unproductive (though useful when subordinated to agriculture); but that agriculture yields a net surplus — *produit net* — over and above the expenses of production. The physiocrats must thus be credited with originating the fertile economic doctrine of *surplus value* — a reward or premium appearing in production for which nature rather than man is responsible, and which is not required to induce men to put forth the effort necessary to produce wealth.

Many of the other doctrines of the physiocrats follow logically from the primacy which they accorded to agriculture. Since agriculture is the sole ultimate source of wealth, they maintained that the revenue of the State should be raised by a single direct tax — the *impôt unique* — levied upon land. All taxes must, they thought, in the end come out of rent anyway; and it was better that the landlord should pay them at once instead of waiting until they had passed through five or six hands and various profits had added to their amount. Naturally the physiocrats were ardent champions of free trade. They encouraged also the consumption of agricultural products, "in order that the *produit net* might be increased," and were generous champions of the importance and rights of the down-trodden peasantry. *Pauvres paysans, pauvre royaume; pauvre royaume, pauvre roi*, was the borrowed motto of Quesnay's *Tableau Économique*, the most important treatise of the physiocratic school.

Adam Smith. — In 1776 Adam Smith published his *Inquiry into the Nature and Causes of the Wealth of Nations*, the most influential economic treatise ever written. "The life of almost everyone in England, perhaps of everyone," said Bagehot, "is different and better in consequence of it." His writings are found to be very similar to those of the physiocrats, but further developed and modified by his Scotch training and habit of mind. We find in Adam Smith the doctrines of free trade, non-interference, and natural laws, yet all stated more guardedly. Although he does not regard agriculture as exclusively productive, he does show a partiality for agriculture, for in this branch of production, he says, nature labors

[1] Turgot did not count himself a member of the economic sect or school which gave their views the name of "physiocracy," but his economic doctrines are very much like theirs.

along with man. He emphasized the importance of permitting each individual to follow his own self-interest as a means of promoting national prosperity, but he was not unmindful of the existence of altruistic motives in mankind. He accords full recognition to the motives of sympathy and kindness in his *Theory of Moral Sentiments*. But the net result of Smith's teaching was to strengthen and emphasize the *laissez-faire* trend of economic thought in his time. "Two conceptions," said Arnold Toynbee, "are woven into every argument of the *Wealth of Nations*, the belief in the supreme value of individual liberty, and a conviction that man's self-love is God's providence, that the individual in pursuing his own interest is promoting the welfare of all."

Economic Thought in the Nineteenth Century. — *The Classical School.* — The economic philosophy which prevailed during the first half of the nineteenth century is variously designated as the classical, Ricardian, English, or orthodox school. The earlier authors of this period were Jeremy Bentham (1738–1842), Thomas Robert Malthus (1766–1834), David Ricardo (1772–1823), James Mill (1773–1836), and John Ramsay McCulloch (1779–1864). In all of these writers we find the utilitarian philosophy, a deductive method, and the feeling that the outlook for the mass of the laborers was not a hopeful one. They elaborated economic principles, supposed to be good for all times and places, with the positiveness that one expects to find only in the mathematical or physical sciences.

Bentham's great work was the formulation and propaganda of the utilitarian ethics, with its famous first principle or goal of social action — the greatest happiness of the greatest number.

Malthus's principal contribution, contained in his celebrated work, *The Theory of Population*, has already been discussed. While Malthus was himself a particularly charitable and benevolent friend of the working classes, his doctrine of population contributed more than any other single thing to make the political economy of the classical school harsh and gloomy. It *seemed* to say that although wages were low they could be no higher, because if by some fortunate chance wages increased, population was sure to multiply until the wage was forced back to the old level. Poor relief and trade-union activities were both useless. The woe of the poor was due to their own lack of foresight, and could be removed by the poor alone. It was taught "that he who brought children into the world without adequate provision for them should be left to the punishment of nature." The responsibility of poverty was thus thrust upon the poor themselves; the rich were soothed with the assurance that they were not primarily responsible for the condition of affairs. Mathus himself, however, did not frame his doctrine in so remorseless a way. He recognized the importance of what he called "preventive checks" to the increase of the population. Mathus brought the results of elaborate historical and statistical investigations to the support of his doctrines.

Ricardo was perhaps the first economist who adequately realized

the importance of the problem of the distribution of wealth. The backbone of his distributive system was the Malthusian law of population. Ricardo believed that as population increased, society would be forced to resort to poorer and poorer soils in order to obtain food; and as this took place an increasing share of the product of industry would go to the landlord in the shape of economic rent. The division of the remaining product between labor and capital, in Ricardo's view, was determined largely by the standard of living; that is to say, the laborer would receive enough to purchase the necessaries and conveniences required to support him and his family in their customary style of living, while the residue would go to capital in the form of interest and profits. Profits were thus the "leavings of wages." With the passage of time and the settlement of a country, then, Ricardo's theory of distribution taught that rent would absorb a larger and a larger share of the product, wages a constant or slowly increasing amount, while profits would dwindle both absolutely and relatively.

Ricardo's principal work is called *Principles of Political Economy and Taxation.* It was published in 1817, and in it Ricardo elaborates, although he did not originate, the usually received doctrine of rent, which, modified and developed, is the one presented in this book. His ideas in general have a markedly pessimistic tinge. Rent, he said, is due to the niggardliness, not to the bounty, of nature; and his theory of distribution emphasized the natural diversity of interest between wage receivers and profit makers, and the antagonism between the interests of landowners and all other classes of society. Personally he was a kind man, and sincerely devoted to the advancement of humanity. Ricardo is remarkable for his power in the use of the abstract deductive method, and it is noteworthy that this distinction should attach, not to a professional scholar, but to one of the most successful bankers and brokers of his day.

John Stuart Mill, who lived from 1806–1873, closed one period in the development of economic science and began another in England. He started as a thoroughgoing follower of Ricardo, preserved the old doctrines of value, rent, and profits, and advocated *laissez-faire* as a general principle of political expediency. But in his later years Mill advocated the diffusion of property through the regulation and taxation of inheritances, indorsed the appropriation by the State of the future unearned increment of land, and emphasized an important distinction between the production and distribution of wealth. "The laws and conditions of the production of wealth," he said, "partake of the nature of physical truths. There is nothing optional or arbitrary in them. . . . It is not so with the distribution of wealth. That is a matter of human institutions solely. The things once there, mankind, individually or collectively, can do with them as they like. . . . The distribution of wealth, therefore, depends upon the laws and customs of society. The rules by which it is determined are what the opinions and feelings

of the community make them, and are very different in different ages and countries; and might be still more different, if mankind so choose."

The old and the new doctrines found in Mill's *Principles of Political Economy* do not harmonize, however, and the result is a work one of the most valuable of modern times, yet full of inconsistencies. Nevertheless, Mill will always be regarded as the culmination of the school usually known as the English deductive or classical school. Most of the work of the school was deductive; that is, they reasoned by singling out a few main facts of the external physical world and human nature familiar to all, and showing how men must act under the guidance of these laws. None of these economists pretended that the few laws which they considered were the whole of human nature, though they have sometimes been interpreted as if they did so; but they thought that the great multitude of motives which influenced men were too complex to be analyzed, and only one or two (chiefly self-interest) could " be reduced to any assignable law." Despite these limitations, the largest contributions that have been made to economic science came from the English classical school.

Socialism. — Mill's change of heart resulted partly from his study of the socialist writers, who voiced the earliest and most thoroughgoing protest against the views of the classical economists. Modern socialistic doctrine may conveniently be dated from William Godwin's *Inquiry concerning Political Justice* (1793), although Godwin himself was more of an anarchist than a socialist. Godwin and the early French idealists and communists, — Cabet, Saint-Simon, Fourier, etc., — began the attack on the ethical and political views of the orthodox political economy. Later the attack was continued in a somewhat more practical and realistic way by writers such as William Thompson and Robert Owen in England, Bazard and Louis Blanc in France, Rodbertus, Lasalle, and Marx in Germany. The foundation of classical political economy was *laissez-faire*, and its doctrinal structure was built around the system of private capitalistic enterprise. Socialism in essence was a thorough protest against *laissez-faire* and the private ownership of property. Pierre Le Roux used the word " socialism " in 1838[1] with the very purpose of expressing the antithesis of individualism.

In recent times, largely under the influence of Karl Marx, socialism has acquired a distinctive economic theory of its own. Marx, in his work on *Capital*, was in most ways as abstract, deductive, and pessimistic as any of the classical school, but at bottom his whole theory was directed against those fundamental institutions of our social order which the classical economists took for granted. Marx has been credited by some with the discovery of the materialistic or economic interpretation of history, and the whole tendency of the modern scientific socialists has been to emphasize the evolutionary standpoint.

The Sociologists. — Among other influences which broadened

[1] It was used before this in England by the followers of Robert Owen.

Mill's conception of economic science, and induced him to temper the rigor of his early teachings, were the works of Auguste Comte (1798–1857), the founder of modern sociology. Comte was especially severe in his criticism of the methods of the classical economists. He denied, in particular, that it is possible to develop a helpful science of economics distinct from history, ethics, and politics. Not only must these fields, he maintained, be cultivated in common, but the work must be done by inductive, as distinct from deductive, methods. To the classical assumption that a universal science of economics could be formulated, true for all times and places, he opposed the theory that there is in society an ordered change or evolution, and that the capitalistic stage, to which the classical economies conformed, must be studied in connection with the past and the future. Economics, he particularly insisted, cannot be divorced from history.

The Historical School. — This particular line of thought was taken up in Germany about 1850 by three young Germans, Roscher, Knies, and Hildebrand, who vigorously assailed the doctrines of the classical school. They went back to the old premises — self-interest, private property, demand and supply — and traced out the historical development of economic life, coming to the conclusion that economic policies were not absolutely, but only relatively, true. They denied that economic science can discover laws which hold true for all times and all places. They emphasized the importance of the inductive method, of minute investigations into facts, and the study of legal institutions, custom, and ethics in their relation to economic life, while most members of the school entertained a strong sympathy for policies of reform.

Owing to the political ferment in Germany during the infancy of the historical school and the formation of the German Empire when this reaction against the classical economists was at its height, German political economy of the last half of the nineteenth century was impregnated with a striking nationalistic spirit which separated it even further from the cosmopolitanism of the English writers. The creation of a new state is almost invariably attended by the enactment of restrictive legislation, looking to the amalgamation of the diverse elements incorporated into the new state and the protection of its industries from foreign competition. *Laissez-faire*, under these conditions, is particularly difficult to maintain. The new national economy of Germany seemed to voice these political necessities. Like the classical economy of England, it was a creature of its own time and its own environment.

The Economic Optimists. — The classical English economists have often been called pessimists. This is too strong a term, inasmuch as they all saw hope for improvement. What can be said is that they developed pessimistic tendencies. Take it as we will, the Malthusian doctrine of population is tinged with pessimism, and so also is the Ricardian theory of distribution. In opposition to English economists, there was developed elsewhere, about

the middle of the nineteenth century, a scheme of thoroughgoing economic optimism, and this was presented in a more unqualified way by Frédéric Bastiat (1801–1850), than by any one else. Bastiat was an ardent agitator for free trade and a popular pleader for the existing order against the attacks of socialists and anarchists, he was the author of numerous pamphlets, and at the time of his death was engaged on a systematic treatise entitled *Economic Harmonies*, of which the first volume only was completed. According to Bastiat, there is no economic rent. The landowner does not receive an unearned income. What we call rent is simply a return for past investments of capital. The profits on capital also, according to him, are simply a return on past labor, and relatively to wages, a diminishing return. For it is a peculiarity of labor stored up in those products which we call capital, that it continually diminishes in value as compared with present labor. In other words, wages are continually gaining relatively as compared with the profits of capital. Capital may gain absolutely on account of the increase in the amount of capital. Wages gain both absolutely and relatively. Value gives us the ratio of exchange between services. Economic gain is in proportion to economic service except that labor is progressively a gainer on account of the fact that man's present services (as seen in labor) increase in value as compared with man's past services as accumulated in capital.

As Bastiat denied the existence of pure economic rent in the Ricardian sense, he also denied the Malthusian theory of population, holding that no proof could be adduced of a tendency of population to press upon the means of subsistence. The evils that we experience come, according to Bastiat, from man's interference with natural harmonies. Nature works things out well, and this is the best of possible worlds if we could only let nature have her way.

Henry C. Carey, the American contemporary of Bastiat, held similar doctrines, and was apparently the more original man. If either one borrowed from the other, it must have been Bastiat. Probably neither one was guilty of any conscious plagiarism.

The writings of the optimists had a considerable influence for a time in Germany, where they were developed and applied with uncompromising logic by men like Prince-Smith, Faucher, and a considerable number of others who were influential in the press and practical affairs rather than in academic life. In the United States these writings have had a great deal of influence upon a number of early writers, among whom we may mention especially the late Arthur Latham Perry, long professor in Williams College, and Edward Atkinson, a well-known statistician and writer of Boston.

Early American Economists. — The reaction against the English economists, it is interesting to note, began earlier in the United States than in England or Germany. In the early part of the nineteenth century, emphatic dissent from the English doctrines was voiced by a group of publicists, among whom may be mentioned

Alexander Hamilton, Daniel Raymond, Matthew Carey, Hezekiah Niles, and Frederick List. Hamilton's work and views are well known; Niles and Matthew Carey were pamphleteers of considerable note in the first third of the nineteenth century; and List, who, in the view of some authorities, planted the seeds of the German historical school, unquestionably obtained his distinctive nationalistic views about political economy in the United States, and first formulated them in his *Outlines of American Political Economy*, published in 1827.[1]

Daniel Raymond, however, of all the American writers noted, is the least known, and yet the author of the first American treatise on political economy in which a distinctively American system of economic thought is suggested. Raymond's first book, *Thoughts on Political Economy*, appeared in 1820; a second edition, under the title *Elements of Political Economy*, appeared in 1823, and the latter was reprinted with slight changes in 1836 and 1840. The essence of Raymond's system is found in his conception of wealth. Wealth, he maintained, is not an aggregate of exchange values but the opportunity to acquire the material comforts of life by labor. The English political economy, in Raymond's view, was a study of private as opposed to political or national economy. Raymond emphasized the distinction between individual and social wealth, and maintained that the laws of wealth laid down by Adam Smith were untrue of a nation conceived as a unit. The interests of particular individuals, or particular classes, he argued, do not always coincide with the interests of the nation as a whole, and the latter, he concluded, will be best advanced by developing all the national powers to their widest possible extent. He was thus a warm advocate of protection as opposed to *laissez-faire*.

Raymond's views had so impressed Matthew Carey that he offered to support a chair of political economy at the University of Maryland if the University would permit Raymond to fill it. Matthew Carey's son, Henry C. Carey (1793–1879), by far the most influential of the early American economists, was in like manner probably influenced by the teachings of Raymond. Carey was not only an earnest champion of protection, but an indefatigable critic of classical economic doctrines. He denied the truth of the Malthusian principle and the law of diminishing returns; objected to the Ricardian theory of rent; and maintained that the value of a commodity depends upon the cost of reproduction rather than the cost of production, as was, he thought, laid down in the classical theory of value. Carey entertained a concept of wealth very similar to that of Raymond, and in some parts of his work adopted methods of investigation which brought him in close touch with the sociologists and the German historical economists. The keystone of his economic system is the doctrine of association. The

[1] List returned to Germany and was there a forceful writer and agitator for German unity, and is identified rather with the history of economic thought of Germany than with that of the United States.

increasing mastery of man over nature, or the increase of wealth, Carey held to be dependent upon the increasing efficiency resulting from a compact, homogeneous population, in which agriculture and manufacture are conducted side by side, in which the home-market idea is carried out in the most complete way, and in which, to be brief, the association of industrial and social units is most intense and intimate. It can be readily understood why the economic philosophy of Carey was so inimical to free trade at every point.

The Austrian School. — The protests against the classical economists which we have been considering were directed largely against the narrow scope and deductive methods of the classical school. The Austrian economists represent a reaction not against their methods, but against the conclusions, and particularly against the theory of value of the classical school. The great contribution of the Austrian school is the marginal utility theory of value, which has been most assiduously applied in economic analysis by a group of Austrian economists, among whom may be specially mentioned Menger, Wieser, Sax, and Böhm-Bawerk. But the marginal utility theory of value was advanced almost simultaneously, about 1871, by the English economist Jevons, the Austrian economist Menger, and the French economist Walras.[1]

The Austrians have been a leading force in producing what is not inaptly termed a renaissance in theory, although, as stated, they indorsed the deductive and abstract methods of the classical economists. The classical theory put the emphasis upon supply or the conditions of supply, maintained that cost of production determines value, and found the ultimate measure and explanation of value in the pain and sacrifice of labor. The Austrians maintain that utility, the pleasure or satisfaction derived from consumption, is the ultimate cause and measure of value; they emphasize demand as the English economists emphasized supply; and hold that value determines cost of production and not the cost of production, value. Capital, they conclude, receives its value from the finished product instead of giving value to that product. The work of this school has tended to put the consumer in the place primarily occupied by the capitalist as the center of discussion in economic theory. The work of the Austrians has had a profound influence upon economic writing in the United States.

Present Condition of Economic Thought. — The net effect of all these protests against the classical English economists has been to introduce a welcome catholicity into the methods of economic investigation. The historical school emphasized the evolutionary standpoint and the necessity of minute investigation of the facts of industrial life, while the work of the Austrians operated to strengthen and explain the necessary place of deduction in economic analysis.

[1] In reality the marginal utility theory had been explained many years before this by a number of obscure writers whose ideas, however, never affected the main current of economic thought.

Today the ordinary economist employs either method, or both, as the subject-matter demands, and the controversy about methods has become a thing of the past. With respect to the theory of value, neither supply nor demand, neither cost nor utility, neither the capitalist nor the consumer, is now said to exert a predominating influence in the determination of values. The Austrian school, it is now understood, supplied a needed corrective without revolutionizing the earlier theory of value. The Austrians themselves are seen to have been guilty of laying exaggerated emphasis upon the consumer's influence upon value and price, and there is reason to believe that their analysis is based in some degree upon a faulty psychology.

So, similarly, with respect to the scope of economics. The attempt of the classical economists to isolate an "economic man" ruled entirely by an enlightened self-interest and unaffected by political, ethical, and humanitarian impulses, is recognized to have been a mistake. But economics has never given itself to a complete study of politics or ethics. It considers ethical and political phenomena when these cannot be dissociated from economic phenomena, but insists, nevertheless, upon the separation of economics from ethics, politics, and sociology. We recognize that these fields are not wholly or clearly differentiated, but we recognize just as clearly that a division of labor is necessary if accurate results are to be achieved. Furthermore, this division of labor is showing itself progressively within the limits of economics itself, as it has shown itself in all growing sciences. Indeed, the present condition of economic thought was so accurately predicted by W. S. Jevons, in 1876, that his words — written in the midst of the controversy among the adherents of the deductive, historical, mathematical, and sociological methods of investigation — may well be employed to picture the condition of the science of economics as it exists today:

"As I have previously explained, the present chaotic state of economics arises from the confusing together of several branches of knowledge. Subdivision is the remedy. We must distinguish the empirical element from the abstract theory, from the applied theory, and from the more detailed art of finance and administration. Thus will arise various sciences, such as commercial statistics, the mathematical theory of economics, systematic and descriptive economics, economic sociology, and fiscal science. There may even be a kind of cross subdivision of the sciences; that is to say, there will be division into branches as regards the subject, and division according to the manner of treating the branch of the subject. The manner may be theoretical, empirical, historical, or practical; the subject may be capital and labor, currency, banking, taxation, land tenure, etc., — not to speak of the more fundamental division of the science as it treats of consumption, production, exchange, and distribution of wealth. In fact, the whole subject is so extensive, intricate, and diverse, that it is absurd to suppose it can be treated in any single book, or in any single manner."[1]

[1] Jevons, *Theory of Political Economy*, 3d ed., pp. xv, xvi.

APPENDIX B

SUGGESTIONS FOR STUDENTS AND TEACHERS

Some teachers of economics rely chiefly upon classroom discussions of assignments in a textbook, supplemented, possibly, by certain other reading requirements. Others make large use of lectures and of problems and brief reports assigned in connection with particular subjects discussed in the class. Some require the student to write one or more longer essays or themes on specific topics. In this book specific references, questions, and problems have been appended to each chapter. The aim has been to list only books and papers that have value in themselves and that have a direct bearing upon the subject matter of the respective chapters. References to parallel discussions in other elementary textbooks have for the most part been avoided, the aim being to enable the student to extend his inquiries by reading more advanced and comprehensive treatments of particular problems.

There is no one " best way " of teaching economics, for the methods used must depend very largely upon the size of the classes and the maturity of the students. It has been the experience of the writers, however, that whatever the relative degree of emphasis put upon lectures, classroom discussions, and assigned problem work of different sorts, mastery by the student of one book on general economics, or at least of so much of it as treats of fundamental economic principles, is an essential part of every introductory course in the subject. When pressed for time, the teacher using this book may find it desirable to omit all of it save Book II, " Principles and Problems." When more time is available, it may be deemed wise to include discussions of certain subjects not treated in this volume. " The economic problems of municipalities," "the elements of statistical method," " the problems of poor relief," " the general principles of market organization," are a few among many possible supplementary topics.

Valuable suggestions on the teaching of elementary economics will be found in various papers and discussions printed in the *Journal of Political Economy*, Vols. xvii–xxii (1909–1914). Some help may also be gained from papers by C. J. Bullock (*Education*, Vol. xi); F. R. Clow (*Economic Studies*, Vol. iv); R. F. Hoxie (*Journal of Political Economy*, Vol. ix); H. R. Mussey (*Educational Review*, Vol. xi); and H. W. Thurston (*School Review*, Vol. iv).

The problem of making an adequate amount of supplementary reading available to students in large classes has been made easier to solve by the publication of volumes of excerpts, designed for this particular use. (W. H. Hamilton, *Current Economic Problems;* L. C. Marshall, C. W. Wright, and J. A. Field, *Materials for the Study of Elementary Economics;* C. J. Bullock, *Selected Readings in Economics;* F. A. Fetter, *Source Book in Economics.*) Similar volumes have been made up of material on special economic problems. References to many of these will be found among the reading lists appended to the different chapters in this book.

General Works on Economics. — Other American textbooks on economics, of college grade, are: C. J. Bullock, *Introduction to the Study of Economics;* H. J. Davenport, *Outlines of Economic Theory;* F. A. Fetter, *Principles of Economics;* Irving Fisher, *Elementary Principles of Economics;* H. R. Seager, *Introduction to Economics;* and E. R. A. Seligman, *Principles of Economics.* Larger in scope or more detailed in their treatment of the general principles of economics are H. J. Davenport, *Economics of Enterprise;* F. A. Fetter, *Economics* (2 vols.); A. T. Hadley, *Economics;* F. W. Taussig, *Principles of Economics* (2 vols.). F. A. Walker's *Political Economy* ("advanced course"), although presenting a somewhat antiquated view of economic principles, will be found still to possess much interest for the reader.

Among English books, Alfred Marshall's *Principles of Economics* occupies a peculiarly authoritative position. It is characterized by an unusually intimate grasp of the facts of modern economic life and by a rare degree of ability in critical analysis. It attempts to reconcile many of the modern developments in economic analysis with the fundamental tenets of the political economy of David Ricardo and John Stuart Mill. Critics differ with respect to the degree of success with which Marshall has accomplished this reconciliation. Marshall's *Principles* is difficult for any but the mature student, and his own attempt at an abridgement, his *Economics of Industry*, is distinctly inferior to the larger work. Two excellent books that are based in large measure on Marshall's *Principles* are S. J. Chapman, *Outlines of Political Economy*, and A. W. Flux, *Economic Principles.* The comprehensive English work of J. S. Nicholson (*Principles of Political Economy*, 3 vols.) is even more conservative in matters of economic theory than is Marshall's. Edwin Cannan's *Wealth* is a small manual with an original and suggestive point of view. Distinctly the most readable and in many respects one of the best recent English works is P. H. Wicksteed's *The Common Sense of Political Economy.*

Special mention can be made of only a few of the more important German and Austrian works on general economics. Adolf Wagner's *Grundlegung der politischen Oekonomie* (2 vols.) is characterized by great

erudition and by systematic and painstaking classifications and definitions. It is of particular interest to American students on account of its distinctive point of view, and especially its emphasis upon the general ethical and political aspects of economic problems. The *Allgemeine Volkswirtschaftslehre* of Gustav Schmoller (2 vols.) is characterized by the consistent use of the historical method, and by the extent to which psychology and ethnology as well as history are drawn upon to explain modern economic institutions. Wilhelm Lexis's *Allgemeine Volkswirtschaftslehre* is a smaller work, embodying a better exposition of fundamental economic principles than is found in most German works, and distinguished by a large measure of originality. The *Allgemeine Volkswirtschaftslehre* of Eugen von Phillipovich (2 vols.) contains a more systematic presentation of general economics than does any other work in the German language. It is distinctly catholic, or perhaps, eclectic, in its general theories.

The *Traité théorique et pratique d'économie politique* (4 vols.) of Paul Leroy-Beaulieu may be taken as the best example of a rather dogmatic type of laissez-faire economics that still commands a large and influential following in France. Representative of a newer school of thought, more hospitable to various projects for constructive economic betterment, is the work of Charles Gide, whose two books on general economics are available in English translation (*Political Economy* and *Principles of Political Economy*). The best modern French work is, perhaps, Adolphe Landry's *Manuel d'économique*.

In other European countries, especially in Italy, Holland, and the Scandinavian countries, there has been much economic writing of a high order. Attention may be called to the English translation of the excellent Dutch work of N. G. Pierson, *Principles of Economics* (2 vols.), and to the French translation (*Manuel d'économie politique*) of a book (in Italian) by Vilfredo Pareto, which is possibly the most noteworthy of various modern works in which mathematical methods are used in economic analysis.

Encyclopedias. — The most comprehensive encyclopedia of economics is the great *Handwörterbuch der Staatswissenschaften* (3d ed., 7 vols.), edited by Conrad and others. A smaller, but useful, German reference work is the *Wörterbuch der Volkswirtschaft* (3d. ed., 2 vols.), edited by Elster. In French, the *Nouveau dictionnaire d'économie politique* (2 vols., with supplements), edited by Say and Chailley, is already somewhat antiquated and represents a rather narrow point of view. For special fields there are the *Dictionnaire des finances* (2 vols.), edited by Say and Foyot, and the *Dictionnaire du commerce, de l'industrie, et de la banque* (2 vols.), edited by Guyot and Raffalovich. The English *Dictionary of Political Economy* (3 vols.), edited by Palgrave, is a standard reference work. There is no American dictionary or encyclopedia covering the

whole field of economics. The *Encyclopædia of Social Reform*, edited by Bliss, is useful in its special field. Although published in the early eighties, some of the articles in Lalor's *Cyclopædia of Political Science, Political Economy, and United States History* (3 vols.) remain of value. The newer *Cyclopedia of American Government*, edited by McLaughlin and Hart, may be consulted on topics in public finance and related fields.

Periodicals. — Many of the most important contributions to economics appear in special periodicals devoted to the subject. In the United States there are the *Quarterly Journal of Economics*, the *Journal of Political Economy* (monthly), the *Political Science Quarterly*, and the *American Economic Review* (the organ of the American Economic Association, quarterly). The *Annals of the American Academy of Political and Social Science* (monthly), the *American Political Science Review* (quarterly), and the *American Journal of Sociology* (bi-monthly), frequently publish papers that are of importance for the student of economics. Limited to more specialized fields are the *Quarterly Publications of the American Statistical Association*, the *American Labor Legislation Review*, the *Bulletin of the National Tax Association* (monthly), and the *Survey* (weekly, covering the field of charities and other organized movements for social betterment).

In England the principal economic periodicals are the *Economic Journal* (the quarterly organ of the Royal Economic Society), the *Journal of the Royal Statistical Society* (monthly), and the *Economic Review* (quarterly, largely devoted to the ethical aspects of economic problems). The economic journals of the various countries of continental Europe, although of great value to the specialist, are too numerous to mention here.

The " trade journals " of different special industries and in the fields of banking and insurance are often useful to the special students in these fields. In particular the periodicals dealing with the general conditions of business and the money market are often indispensable. The *Commercial and Financial Chronicle* of New York (weekly) may be specially mentioned on account of the completeness and accuracy of its statistics of money market conditions. For London the *Economist* and the *Statist* occupy a similar position. The *Annual Financial Review* contains convenient compilations of the more important statistics that have appeared in the *Commercial and Financial Chronicle* during the preceding year. A useful annual survey of international financial conditions is given by Raffalovich's *Le marché financier* (Paris). Such annuals as the *Statesman's Year Book* (London), *Whitaker's Almanac* (London), and the *World Almanac* (New York), are often useful for reference purposes. The *American Year Book* contains, among other things, an excellent annual review of important economic legislation.

Reference to the enormous output of articles on economic subjects in

periodicals of a more general or popular type is now easy by using the " cumulative indexes " and " readers' guides " that will be found in most colleges and public libraries. These articles are, of course, of very uneven quality and must be used discriminatingly. Most of the more important current articles on economic topics are listed, with many brief abstracts or appraisals, in the successive numbers of the *American Economic Review*.

Books in Special Fields. — The references given in connection with the different chapters in this volume are sufficient to enable one to make a fairly thorough study of the different subjects treated in these chapters. Many of the books referred to contain more elaborate bibliographies on their special subjects. The student should, of course, be familiar with the use of the card catalogue of a modern library. In using such a catalogue it should be remembered that the library classification of books by subjects is very rarely entirely satisfactory, so that one should exercise one's ingenuity in searching under different subjects. The Library of Congress has printed in pamphlet form lists of books and articles on various practical economic problems, and is often able to furnish, at a small price, shorter typewritten lists of references on other subjects. Short annotated bibliographies are issued by different state legislative libraries and municipal reference libraries. The bibliographies in the various economic encyclopedias, especially the *Handwörterbuch der Staatswissenschaften*, will often be found helpful. A very complete list of new books in various fields of economics is published quarterly in the *American Economic Review*.

Government Publications. — The student should early acquire some familiarity with the use of government documents as first-hand sources of information. Aside from statutes and the proceedings of legislative bodies these publications include: (1) annual reports of different administrative departments and bureaus; (2) reports of special investigations made by the permanent bureaus or by special commissions; (3) records of the hearings before legislative committees of inquiry. A record of the enormous output of the publications of the federal government is contained in the *Monthly Catalogue of Public Documents*, published by the Superintendent of Documents, Washington. This has an annual index, and a comprehensive *Document Catalogue* is also published for each Congressional period. The *Check List of Government Documents* is convenient to use in locating regular or routine documents published before 1910. The *Annotated Tables of and Consolidated Index to the Congressional Series of United States Public Documents* may also be used for the same purpose. Poore's *Descriptive Catalogue of the Government Publications of the United States, 1774–1881*, is useful in locating irregular or obscure publications of various sorts. In nearly every congressional district there is a public or college library which is an official depository

for federal documents and has a nearly complete set of those published in recent years. Current documents may sometimes be obtained without charge from the departments or bureaus issuing them or from the Representative or Senator from one's district or state. They can always be purchased at small prices from the Superintendent of Documents. The Superintendent of Documents issues small printed price lists of the publications in different special fields.

The Library of Congress publishes a *Monthly List of State Documents*. Bowker's *State Publications* (three parts) give a fairly complete list up to about 1900, and a full index to the economic materials in state documents is being published by the Carnegie Institution. The volumes for a number of the larger states have already appeared. Municipal documents are often published in an unsystematic way, and there is no general index or list of either current or past municipal publications. The student should find it both practicable and instructive, however, to become acquainted with the published documents of the city in which he lives, or those of some large city in his state.

The British *Parliamentary Papers* contain a wealth of material on a wide range of economic topics. Much of this is listed in P. S. King & Son's *Catalogue of Parliamentary Papers, 1801–1900* (with *Supplement, 1901–1910*). Lists of current publications are published by several London dealers. The more important ones are noted in the English economic journals, and (more fully) in an occasional "Blue Book Supplement" to the *New Statesman*, a London weekly. Among the government publications of other countries we can mention here only the valuable statistical year-books published by many nations and by a number of important cities. The student will find the statistical annuals of Australia and New Zealand especially interesting and instructive.

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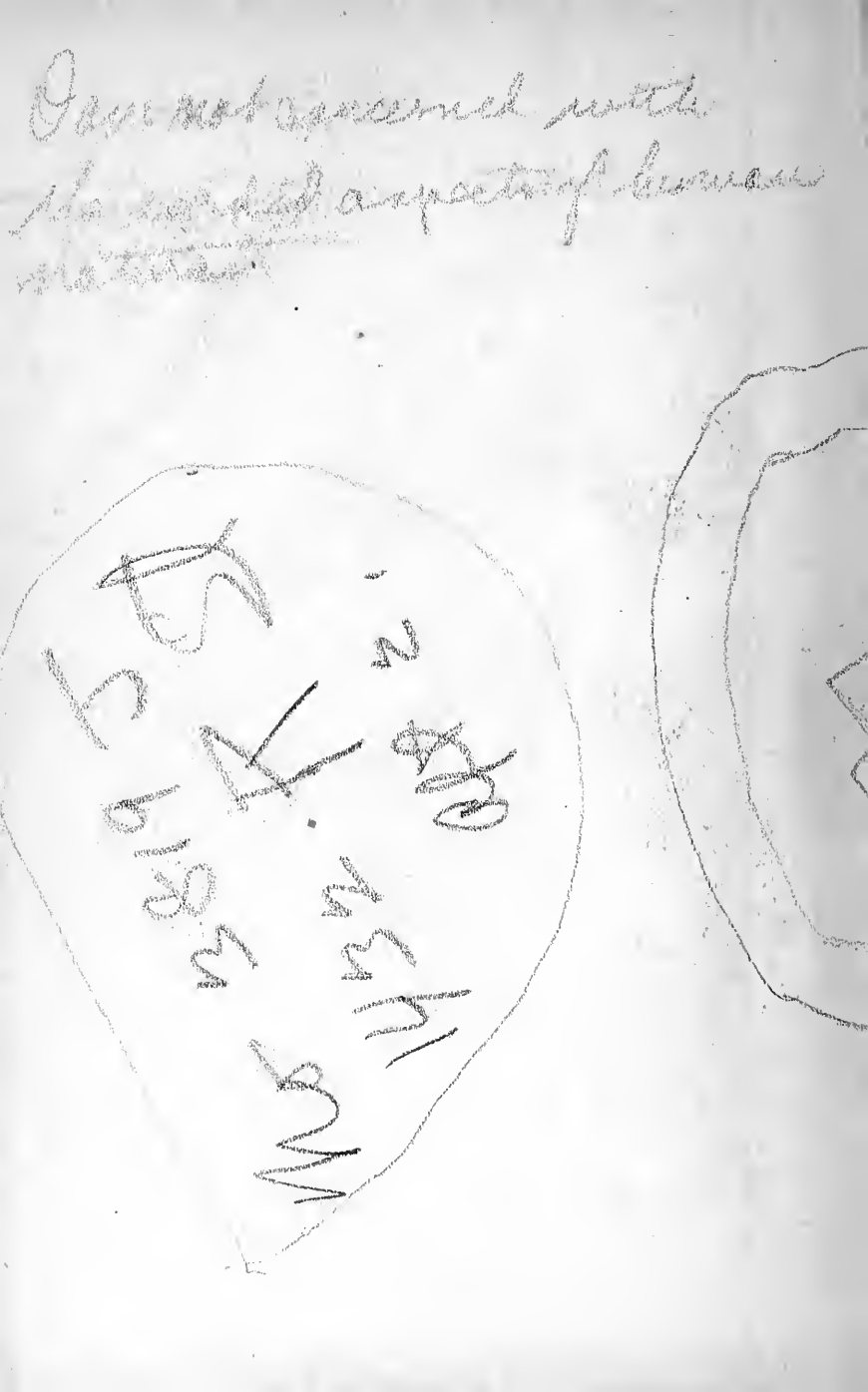

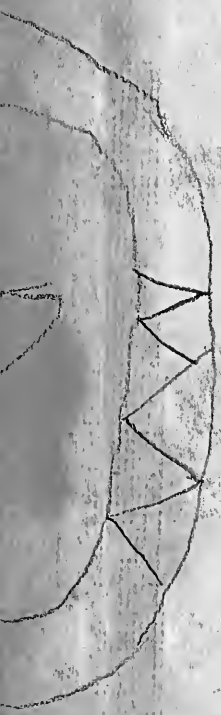

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